

# SOUTHERN TEXTILE BULLETIN

VOL. VIII

CHARLOTTE, N. C., JANUARY 7, 1915

NUMBER 19

## VICTOR MILL STARCH—The Weaver's Friend



THE HOME OF VICTOR MILL STARCH

**THE KEEVER STARCH COMPANY**  
COLUMBUS, OHIO

Why worry about POTATO STARCH when VICTOR MILL STARCH will give as good results as Potato Starch on warps of any numbers, from 6s to 100s.

It boils thin—penetrates the warps—increases breaking strength and carries the weight into the cloth. Being thoroughly washed free of gluten and other foreign matter, it gives a bleach and finish to the cloth that you can get from no other starch.

A trial order will convince you that VICTOR STARCH has no equal in the market.

Southern Agent: JAS. H. MAXWELL, GREENVILLE, S. C.

Eastern Agent: D. H. WALLACE, 8 Beacon St., BOSTON, MASS.

## OUR RINGS

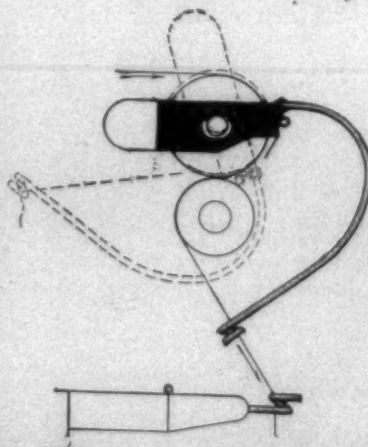
Set the Standard for Quality

THERE ARE NONE OTHERS  
"JUST AS GOOD"



**MIRROR SPINNING RINGS**  
TRADE MARK REG. U.S. PAT. OFF.  
**DRAPER COMPANY**  
HOPE DALE, MASS.

## The Smith Stop Motion for Two Ply Twisting



Eliminates Waste;  
prevents roller laps;  
enables the help to  
tend more spindles,  
the only simple device  
for the purpose.

*Send for Special Circular*

**DRAPER COMPANY**  
HOPE DALE, MASS.

*Southern Agent*

J. D. CLOUDMAN, 40 South Forsyth Street, Atlanta, Ga.



**Farbwerke-Hoechst Co.**

—FORMERLY—

**H. A. METZ & CO.****Aniline and Alizarine Colors, Dyestuffs  
and Chemicals**

Sole Licensees and Importers of the Products of

**FARBWERKE, vormals MEISTER LUCIUS & BRUENING**  
Hoechst - on - Main, Germany

122 Hudson St., New York, N. Y.	210 South Tryon St., Charlotte, N. C.
140 Oliver St., Boston, Mass.	1418 Empire Building, Atlanta, Ga.
104 Chestnut St., Philadelphia, Pa.	20 20 Natoma St., San Francisco, Cal.
23 South Main St., Providence, R. I.	45 Alexander St. Montreal, Can.
317 North Clark St., Chicago, Ill.	28 Wellington, St., Toronto, Can.

**A. H. WASHBURN, President**      **F. H. WASHBURN, Treas. & Mgr.****WASHBURN PRESS**  
(RAY PRINTING CO.)**Commercial, Halftone and Color Printing****Engraving, Embossing and Lithographing****BLANK BOOKS AND SPECIAL RULED BLANKS**  
MADE TO ORDER28 West Trade Street  
PHONE 342**Charlotte, N. C.****Ideal Cotton Mill Sites in the Appalachian South**

The Clinchfield links a limitless coal supply with the South's cotton producing region. Between these points on the Clinchfield there is an abundant supply of the very best Anglo-Saxon labor; climatic conditions are ideal; the dry invigorating mountain air assures efficiency and health of the operative.

Now is the time to investigate. Detailed information cheerfully furnished.

**Carolina, Clinchfield and Ohio Ry.****R. F. Brewer, Industrial Agent****Johnson City, Tenn.**

**The Greatest Improvement Made in  
Cotton Spinning in Quarter of a  
Century**

**The Richards-Hinds Light Running Rolls**

Orders for Over 125,000 Spindles

Received Since January 1, 1914

**Guaranteed Claims.**

Cockley Yarn Preventor	Less Change of Settings
Extra Strength of Yarn	Reduced Cost of Spinning
Less Waste	One-third Saved on Leather Covered Rolls
Greater Production	Better Spinning with Improved Product

For information and prices write to

**The Metallic Drawing Roll Company****Indian Orchard, Mass.****John P. Marston****Gum Tragasol****Kerston Softener****Bleaching Assistant****Bleachers Blue****247 Atlantic Ave.****Boston****SOUTHERN DYESTUFF & CHEMICAL CO.**

Charlotte, N. C.

Southern Selling Agents

**NATIONAL GUM & MICA COMPANY**

Manufacturers and Importers of

**WEIGHTING, SOFTENING, FINISHING AND SIZING COMPOUNDS**

WEIGHTING SOFTENER  
CONCENTRATED SOLUBLE TALLOW  
WHITE SOFTENER  
SWISS GUM  
S. S. SOFTENER  
FINISHING PASTES  
BLEACHERS SOAP

MIKAH COTTON SOFTENER  
SLASHER OIL  
SOLUBLE OIL  
DIRECT and SULPHUR COLORS  
BASIC COLORS  
POTATO STARCHES  
SAGO FLOUR

Perfect materials at low prices. Special information given free by practical men for Sizing, Weighting, Finishing, and Dyeing of all kinds of goods.

If your Finishing is not satisfactory, call on us. We can help you.

Phone 2972.

Office 1203 and 1204 Commercial Bank Building, Charlotte, N. C.

**DIXON LUBRICATING SADDLE CO.**

BRISTOL, RHODE ISLAND



Use Dixon Patent Stirrup Adjusting Saddles, the latest invention in Saddles for Top Rolls of Spinning Machines. Manufacturers of all kinds of Saddles, Stirrups and Levers.

WRITE FOR SAMPLE

**“NIGRUM” Treated Wood SADDLES**

Reg. U. S. Pat. Off.

Which Require No Oil or Grease and Save You Money in Many Ways

If not, write to us at once for information

**GRAPHITE LUBRICATING COMPANY, - - Bound Brook, N. J.****PURO**

**Don't Pay Good Money for  
Impractical, Unmechanical  
and Often Worthless  
Fountains.**

Here is a practical Fountain, which combines the Faucet and Bubble Features—takes care of the overflow waste, and insures

**SAFETY AND SERVICE**

This is an age of sanitary plumbing and the Sanitary Drinking Fountain is one of its important subdivisions.

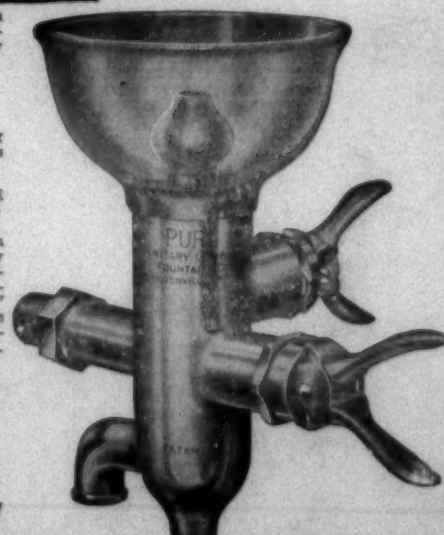
**SAFETY PURO SERVICE FIRST ALWAYS**

Is made of heavy brass with extra heavy nickel plate. Bubbler easily controlled by separate "squeeze" handle. No spurts—no choking—inside regulation prevents "shower-bath." Faucet is controlled by another squeeze handle. Faucet gives full water pressure. Has thread for hose if wanted.

Write us the number of your employees and water pressure and we'll present an interesting proposition to you promptly.

**Puro Sanitary  
Drinking Fountain Company**

342 Main Street, Haydenville, Mass.



Actual Size 7" High



# SOUTHERN TEXTILE BULLETIN

VOLUME VIII

CHARLOTTE, N. C., JANUARY 7, 1915

NUMBER 19

## Clark's Annual Spindle Increase List

The following figures compiled by comparing the Jan. 1st, 1915, edition of Clark's Directory of Southern Cotton Mills with the Jan. 1st, 1914, edition, give the increase in spindles of the Southern cotton mills during 1914. This list does not include machinery purchased to replace old machinery, which is estimated to have been at least 100,000 spindles.

Alabama.	
*Bettie Francis Cotton Mills, Alexander City.....	5,472
Fulton Cotton Mills, Athens.....	1,500
Lowe Manufacturing Company, Huntsville.....	2,000
Merrimack Manufacturing Company, Huntsville.....	1,568
Profile Cotton Mills, Jacksonville.....	848
Lang Cotton Mills, Lanett.....	2,232
Eva Jane Mills, Sylacauga.....	1,028
Total.....	14,648

Arkansas.	
Monticello Cotton Mills.....	1,480

Georgia.	
Acworth Cotton Mfg. Co., Acworth, Ga.....	612
Athens Manufacturing Company, Athens.....	1,148
Star Thread Mills, Athens.....	488
Gochran Cotton Mills, Cochran.....	968
Perkins Hosiery Mills, Columbus, Ga.....	864
Swift Manufacturing Company, Columbus.....	2,000
Swift Spinning Mills, Columbus.....	14,000
Paulding Cotton Mfg. Co., Dallas, Ga.....	1,248
Grantville Hosiery Mills, Grantville.....	3,000
Mary Leila Cotton Mills, Greensboro.....	856
Dixie Cotton Mills, LaGrange.....	1,816
Elm City Cotton Mills, LaGrange.....	868
Park Cotton Mills, LaGrange.....	432
Unity Cotton Mills, LaGrange.....	432
Unity Spinning Mills, LaGrange.....	1,296
Payne Cotton Mills, Macon.....	416
Pelham Mfg. Co., Pelham, Ga.....	264
Bibb Manufacturing Company, Pottersville.....	416
Summerville Cotton Mills, Summerville.....	734
Tallapoosa Mills, Tallapoosa.....	1,024
Total.....	32,882

Kentucky.	
*Kentucky Cotton Yarn Company, Louisville.....	5,000

Maryland.	
*Savage Manufacturing Company, Savage.....	25,600

Mississippi.	
None.....	

Missouri.	
None.....	

North Carolina.	
Asheville Cotton Mills, Asheville, N. C.....	2,240
*National Yarn Mills, Belmont.....	13,056
Aurora Cotton Mills, Burlington.....	1,152
Hopedale Mills, Burlington.....	720
King Cotton Mills, Burlington.....	5,832
Chadwick-Hoskins Mill, Charlotte.....	3,600
Robinson Manufacturing Company, Charlotte.....	1,232
Brander Cotton Mills, Concord.....	416
Brown Manufacturing Company, Concord.....	7,808
Franklin Mill, Concord.....	2,636
Cornelius Cotton Mills, Cornelius.....	1,800
Armstrong Cotton Mills, Gastonia.....	1,600
Flint Manufacturing Company, Gastonia.....	12,000
Gastonia Cotton Manufacturing Company, Gastonia.....	2,800
Gem Cotton Mills, Gibsonville.....	1,888
Harriett Cotton Mills, Henderson.....	1,040
Henderson Cotton Mills, Henderson.....	1,980

\*Indicates New Mills.

A. A. Shuford Mill, Hickory.....	1,272
Pickett Cotton Mills, High Point.....	1,044
Highland Cotton Mills, High Point.....	916
Anchor Mills, Huntersville.....	504
Patterson Manufacturing Company, Kannapolis.....	9,000
Linn Mills, Landis.....	400
Dacotah Cotton Mills, Lexington.....	2,112
Lowell Cotton Mills, Lowell.....	2,000
Jennings Cotton Mills, Lumberton.....	4,488
Lumberton Cotton Mills, Lumberton.....	3,648
Clinefield Manufacturing Company, Marion.....	25,600
Mayes Manufacturing Company, Mayworth.....	3,780
Mooreville Cotton Mills, Mooreville, N. C.....	400
Catawba Cotton Mills, Newton.....	208
Thrift Manufacturing Company, Thrift.....	4,000
Hannah-Pickett Mills, Rockingham.....	4,500
Ledbetter Manufacturing Company, Rockingham.....	684
Pee Dee Manufacturing Company, Rockingham.....	416
Roxboro Cotton Mills, Roxboro.....	5,000
Selma Cotton Mills, Selma.....	5,160
Ella Mills, Shelby, N. C.....	400
Bloomfield Manufacturing Company, Statesville.....	200
Virginia Cotton Mills, Swepsonville.....	1,600
Cleghorn Mills, Rutherfordton, N. C.....	264
Taylorsville Cotton Mills, Taylorsville.....	960
Smitherman Cotton Mills, Troy.....	416
Green River Manufacturing Company, Tuxedo.....	416
Valdese Manufacturing Company, Valdese.....	2,500
Shaw Cotton Mills, Weldon.....	732
P. H. Hanes Knitting Company, Winston-Salem.....	500
Riverside Mills, Worthville.....	1,020

Total.....145,940

Oklahoma.	
None.....	

South Carolina.	
Brogan Mills, Anderson.....	780
Riverside Mills, Anderson.....	5,040
Arcadia Mills, Arcadia.....	2,600
Springstein Mills, Chester.....	448
Clinton Cotton Mills, Clinton.....	2,784
Lydia Cotton Mills, Clinton.....	2,540
Banna Manufacturing Company, Goldville.....	4,096
Greenwood Cotton Mills, Greenwood.....	2,560
Grendel Mills, Greenwood.....	12,800
Panola Cotton Mills, Greenwood.....	2,472
Franklin Mills, Greer.....	672
Jackson Mills, Iva.....	672
Mollohon Manufacturing Company, Newberry.....	3,940
Pelzer Manufacturing Company, Pelzer.....	1,000
Aragon Cotton Mills, Rock Hill.....	448
Carhartt Cotton Mills, Rock Hill.....	224
Harriss Manufacturing Company, Rock Hill.....	728
Pacolet Manufacturing Company, Trough.....	6,480
Tucapau Mills, Tucapau.....	1,440
Ware Shoals Manufacturing Company, Ware Shoals.....	3,200
Glenn-Lowry Mills, Whitmire.....	4,000
Whitney Manufacturing Company, Whitney.....	13,000
Woodruff Cotton Mills, Woodruff.....	1,200

Total.....73,124

Tennessee.	
Richmond Spinning Company, Chattanooga.....	1,400
*Appalachian Mills, Knoxville.....	7,500
Knoxville Cotton Mills, Knoxville.....	1,440
Morgan & Hamilton Company, Nashville.....	2,240
Sylvan Cotton Mills, Shelbyville.....	3,120

Total.....15,700

(Continued on Page 9.)



# Government Report on Cotton Business

The magnitude of the country's cotton business—both planting and spinning—is told in a statement given out at Washington, Dec. 26th by the Director of the Census.

This report is presented in two divisions: (1) The supply of cotton in the United States for the year ending August 31, 1914, and the distribution of the same, together with detailed statistics of spindles, cotton consumed, cotton on hand and imports and exports of cotton and cotton goods, including comparative figures for previous years; and (2) the world's spindle and consumption of cotton for 1900 and 1914, together with statistics of cotton on hand in foreign countries.

## Supply of Cotton.

For the year ending August 31, 1914, the supply of cotton in the United States amounted to 15,720,183 bales, and of linters to 772,225 bales, making a total for cotton and linters combined of 16,492,408 bales. This is the largest amount for any year with the exception of 1912, when the aggregate was 17,896,226 bales.

Of the total supply of cotton for 1914, 5,617,408 bales, or 35.7 per cent, including the quantity destroyed by fire was consumed in this country; 8,654,958 bales, or 55.1 per cent, was exported; while 1,447,817 bales, or 9.2 per cent, remained in the country at the close of the year. The mill consumption of cotton and linters in the United States for 1914 was the largest in the history of the country, exceeding that for 1913, the next largest, by 98,403 bales, and exceeding the average for the eight years preceding 1914 by 843,250 bales. The exports during the year were the second largest for any year, exceeding those for the preceding year by 113,582 bales.

## Stocks of Cotton.

The stocks of cotton in the United States at the close of August, 1914, amounted to 1,447,817 bales, and of linters to 200,049 bales, a total of 1,647,866 bales. This amount compares with 1,648,438 bales on the corresponding date in 1913, 1,776,885 bales in 1912, 1,375,031 bales in 1911, 1,040,940 bales in 1910, and 1,483,585 bales in 1909. Those held in the manufacturing establishments amounted to 751,219 bales, a decrease of 26,939 bales from the quantity so held in 1913, and 265,519 bales less than the quantity held in 1907 (1,016,738 bales), which was the largest amount for any year since the inauguration of these reports. On the basis of the consumption during the past year, the stocks held in manufacturing establishments August 31, 1914, represent about a six weeks' supply for the American cotton mills.

The total quality of cotton imported into the United States during the year ending August 31, 1914, amounted to 280,290 equivalent bales of 500 each. Of this cotton, 14,644 bales were re-exported, leaving in the country 255,646 bales. Practically the entire quantity of cotton consumed in the United States is

produced in this country, only small quantities for special purposes being imported.

## Spindles.

The term "cotton spindles" is applied to all spindles used for spinning cotton only, regardless of the character of the establishments in which located, and therefore does not include those which consumed a mixture of cotton and other fibers. The number of cotton spindles returned as having operated in the United States during the year ending August 31, 1914, was 32,107,572, exceeding the number for the previous year by 587,806. There were 636,440 spindles returned as idle and as having consumed no cotton whatever during the year. This number compares with 629,851 in 1913 and 1,004,151 in 1912.

In the total number of cotton spindles Massachusetts exceeds every other State, having 11,046,990, or 33.8 per cent of the total for the United States in 1914; South Carolina ranks second, with 4,632,204, or 14.1 per cent; North Carolina third, with 3,813,940 spindles, or 11.6 per cent; Rhode Island fourth; Georgia fifth; New Hampshire sixth; Connecticut seventh; Maine eighth, and Alabama ninth. No other State reported as many as a million spindles. The States showing the largest net gains during the year were North Carolina, South Carolina, Alabama, Georgia and Virginia, in the order named, the gain in North Carolina alone representing 37 per cent of the net gain for the United States.

## Localization of Cotton Spinning.

There were 60 counties in the United States which had more than 100,000 cotton spindles each, the total number of such spindles being 26,591,027, or 81.2 per cent of the aggregate for the country. Of these counties, three, with a total of 9,879,412 spindles, or 30.2 per cent of the aggregate for the United States, had more than 1,000,000 spindles each; ten, with 7,004,791, or 21.4 per cent of the aggregate, had 500,000 but less than 1,000,000 each; 19, with 5,751,960, or 17.6 per cent of the aggregate, 200,000, but less than 500,000 each, and 28 with 3,954,864, or 12.1 per cent of the aggregate, 100,000 but less than 200,000 each. Of the 60 counties 13 are in South Carolina, ten in North Carolina, seven each in Georgia and Massachusetts, four each in Alabama and Maine, three each in New Hampshire and Rhode Island, two each in Connecticut and New York, and one each in Maryland, New Jersey, Pennsylvania, Tennessee and Virginia.

## Cotton Consumed.

The quantity of cotton consumed in the United States during the year ending August 31, 1914, was 5,777,408 bales, compared with 5,483,321 bales in 1913, 5,129,346 bales in 1912, 4,498,417 bales in 1911 and 4,621,742 bales in 1910. It is the largest amount ever consumed in a single year, being 94,087 bales larger than that in 1913, the next largest, 448,062 bales larger than that in 1912, and the third largest, and 485,871

bales larger than in 1909, the fourth largest.

Massachusetts, with 1,347,778 bales leads all the other States in the other State in the quantity of cotton consumed; North Carolina, with 906,177 bales, is second; South Carolina, with 794,678 bales, third; and Georgia, with 632,332 bales, is fourth. From 1909 to 1914 the consumption of cotton in North Carolina increased from 653,350 bales to 906,177 bales, or 38.7 per cent; in South Carolina, from 623,454 bales to 794,678 bales, or 27.5 per cent; and in Georgia from 486,752 bales to 632,332 bales, or 29.9 per cent.

Of the total consumption of cotton in the United States during the year ending August 31, 1914, 5,301,426 bales were upland, 81,673 bales sea island and 194,309 bales foreign. In the cotton growing States the consumption was 2,925,294 bales, and in all other States 2,652,114 bales, 1914 being the third consecutive year in which the consumption in the cotton growing States has exceeded that in all other States.

## Consumption in Cotton States.

A most significant fact shown by this report is the rapid growth of the industry in the cotton growing States. In 1880 there were only 561,360 active cotton spindles in these States, and the quantity of cotton consumed was 188,748 bales. In 1914, 12,711,303 spindles were operated and the quantity of cotton and linters consumed was 3,023,415 bales. Between 1900 and 1914 the consumption in these States increased 98.5 per cent, while in the New England States it increased only 17.9 per cent, and in all other States 38.5 per cent. The consumption in 1900 in the cotton growing States amounted to 39.3 per cent of the total for the country, compared with 49.3 per cent for the New England States and 11.4 per cent for all other States. For the year ending August 31, 1914, the consumption in the cotton growing States formed 51.4 per cent of the total for the country; that in the New England States, 38.2 per cent, and that in all other States, 10.4 per cent. Of the total number of spindles operated during 1914, 39.6 per cent were in the cotton growing States, 54.2 per cent in the New England States and 6.2 per cent in all other States.

## Exports of Raw Cotton.

The exports of domestic raw cotton and linters from the United States in 1914 amounted to 8,914,839 bales. Galveston, with a total of 3,214,567 bales, ranked first among the customs districts in 1914, followed by New Orleans, with 1,705,559 bales; Georgia, with 1,513,039 bales; Mobile, with 369,613 bales; New York, with 359,421 bales, and North Carolina, with 358,279 bales. The combined exports for the first three districts named amounted to 6,433,165 bales and represented 72.2 per cent of the total for the country.

American manufacturers of cotton goods in the United States have largely confined their activities to the home market. The value of the cotton goods manufactured in the country in 1909, as returned at the

census of 1910, exclusive of hosiery and knit goods, the manufacture of which might be deemed a branch of the cotton industry, amounted to more than \$628,000,000, while the value of the exports of cotton goods for the fiscal year 1909 amounted to \$31,878,566, or only about 5 per cent of the total manufactured.

## Exports and Imports.

The value of cotton goods of domestic manufacture exported during the fiscal year 1914 amounted to \$51,467,233. More than one-half of this amount is accounted for by the exports of cotton cloth, which amounted to 414,860,013 square yards, valued at \$28,844,627. Unbleached cloths, aggregating 199,886,679 square yards, valued at \$13,838,005, were exported during the year. More than two-fifths of this quantity was sent to China, other countries in the order of the amount taken being Aden, India, Chile, Cuba, Philippine islands, San Salvador, British East Africa, Turkey, Canada, Bolivia and Colombia. Colored cloths to the value of \$11,613,653 were exported during the year. The most important customer for these was the Philippine islands, but large quantities were also sent to the West Indies, Central and South America and Canada. Of the other cotton goods exported, Canada was the largest customer, taking very large proportions of the clothing and other wearing apparel.

The total value of cotton manufactures imported into the United States during the year ending June 30, 1914, amounted to \$69,410,964. The United Kingdom, Germany, France and Switzerland, in the order named, contributed the largest amounts, these four countries furnishing 96 per cent of the total. The value of the laces, edgings, embroideries and the like imported was \$33,865,822. Switzerland led in these goods, followed by the United Kingdom, France and Germany. Cloths imported during the year amounted to 61,633,329 square yards, valued at \$11,845,801. Of this, the United Kingdom furnished 38,945,578 yards, or 63 per cent of the total, and France more than one-half of the remainder. During the year thread and yarn valued at \$3,877,225 were imported, nearly all of which came from the United Kingdom. The imports of knit goods amounted to \$5,671,863, practically the entire amount coming from Germany.

There were 146,397,000 cotton spindles active at some time during the year ending August 31, 1914, of which 56,300,000 were in the United Kingdom, 32,107,000 in the United States, 11,550,000 in Germany, 9,160,000 in Russia, 7,410,000 in France, 6,500,000 in India, and smaller numbers in other countries. The world's consumption of cotton during the year aggregated 21,223,000 bales of 500 pounds net weight.

In considering these figures for cotton used, it must be remembered that, except for the United States these amounts refer almost exclusively to cotton consumed in spinning and do not include that used in

(Continued on Page 16.)



# Economy in Dyeing

It is difficult to write on any dyeing topic at present without digressing to consider the influence of the present war, which has raised an entirely new situation by causing a serious shortage in dyers' materials—so serious as to threaten the dyeing industry with starvation unless something be done and that quickly. Talk about the duty on alcohol is far wide of the mark at the present juncture. The removal of the duty from alcohol would not greatly improve the dyer's chances of buying, say, beta-naphthol, sulphide blues, anthracene brown, patent blue, and many other dyes urgently needed at present, but unfortunately well-nigh unobtainable. In heavy chemicals there is no pinch, and need be no serious shortage apart from potash salts, the main supply of which has hitherto come from the Stassfurt mines. Most potash salts used by the dyer had already been displaced partly by cheaper soda compounds—e. g., bichrome and chlorate of potash,—and the disadvantages of a lower standard of purity of many soda compounds due to deliquescence, etc., may be overlooked for the purpose of providing thoroughly useful substitutes in the present emergency. In tanning, oils, soaps and mordanting materials there should be no great scarcity or increase in price. It is when we come to deal with dyestuffs that the problem becomes more acute.

The coal-tar dyestuffs are of similar parentage to many of the high explosives used in war, and other things being equal, a war will raise the price of many products which are necessary in dyestuff manufacture. At present, however, this is almost insignificant by comparison with the scarcity created by a war with one country we have allowed to gain something almost like a monopoly in dyestuff manufacture. There is some comfort in the fact that up to now, at any rate, the same pinch has been felt everywhere, and therefore we have competed on equal terms with nations not at war. It has recently become evident, however, that neutral countries, especially the United States, are being assisted with German dyes so far as possible, to impose a handicap on the British competitor. As soon as present supplies are exhausted we shall probably have to do with fewer vat dyes and chrome dyes of the anthracene class as long as the war lasts. Of other classes of dyes it ought to be possible for British and Swiss makers to keep trade going by supplying them in smaller quantities for immediate use only. We have plenty of raw oils in this country. British makers are familiar with the manufacture of a sufficient range of products, and it is to be hoped that rapid extensions of plant will be made to meet the present demand.

It may well be that before the war is over we shall have occasion to remember the virtues of certain natural dyes which had largely lost prominence before the war. Fustic, weld, flavin, cudbear, all have valu-

able properties on wool. The yellows on a copper mordant or a copper-bichrome mordant give Khaki-browns of good properties. Cutch, too, gives a good, bright brown on wool, which can be saddened in several tones according to copper or iron used. The all-round fastness is good; the only drawback is its tendency to harshness, which is not likely to be a hinderance in most cases—e. g., in dyeing for military cloths. The public has been educated up to a standard of fastness which can hardly be maintained in the present circumstances, especially in the case of cotton goods. On the other hand, there will not be such severe demands by fashion for bright shades, and this will render possible the use of dyes less difficult to obtain.

It is hardly fair that dyers who have spent pounds on German dyes and pence on English products should suddenly expect the English firms to supply them adequately. On the other hand, it is a matter of patriotism that the English firms should not merely make huge profits for the time being, but should do all in their power to keep the dyeing industry of Great Britain from starvation. It is surely possible for an arrangement to be made whereby the dyeing trade will guarantee support to the English dye-makers, no matter when the war may finish—such support for a definite period as will recoup the dye manufacturer for the heavy expenditure in new plant necessary to meet the great increase in demand. This is a matter which the Government committee might well take up. This is a great emergency, and it can only be met by sweeping action.

To the dye-makers one would suggest that they temporarily put out all classes of dyes as pastes, instead of powders, where by so doing they can save troublesome filtration and expedite the output. Filtration adds to the cost of plant considerably, and it is notorious that certain dyestuffs have never been put out as commercial products because of difficult filtration. In erecting emergency plant to meet the present situation the omission of filtration, drying, and grinding would greatly reduce the expenditure in plant. The problem of dye manufacture promises to become still more acute when it is observed that certain dyes and developers which are absolutely essential to the dyeing industry, and have in the past been made by English firms, are now unobtainable and no source of supply can be discovered. There is no satisfactory reason why after the first few weeks of surprise the supply of anthracene brown should not have been equal to the demand, tremendous though the demand has been. This dyestuff is made by heating gallic acid with benzoic acid and strong sulphuric acid. Gallic acid is made from tannin, the supply of this material being unaffected to any serious extent by the war. Benzoic acid is made from toluene, of which there need be no permanent deficiency, by chlorina-

tion and boiling with milk of lime. Large supplies of electrolytic chlorine are available. Why, then, should our military cloths be dyed with any and every dyestuff but the anthracene brown found most suitable? Surely this is a case for Government action, and in the interests of military efficiency, if nothing else, plant should be laid down.

In discussing the application of economy in dyeing, it may be pointed out that only a limited number of special examples can be cited. Bad economy frequently results from apparently trivial causes, like an ill-fitting plug in a dye-vessel, and wastage may be enormous in the aggregate. The type of economy effected by repairs of this kind can hardly be dealt with here however, the object being rather to indicate the modern demands on the dyer and how they can be met; also the trend of progress in dyeing so far as it demands economy.

General economy in a dyehouse may be divided into: (1) Economy in dyes and drugs; (2) economy in steam and labor; (3) economy in time; and (4) utilisation of waste or by-products.

1. Buying of both dyes and drugs offers great opportunities for saving. It is impossible to praise too highly a regular system of testing what is bought to see if it is up to standard. It is possible only in this way to know actually what one is buying in the case of chemicals and dyes. Also, for economy's sake, it is desirable to exercise every care in the use of dyes and chemicals. So far as matching is concerned one need say little, as not definite rules can be laid down as to the cheapest way of getting any desired shade of any particular fastness. The use of bottoming colors has been well attended to, and few dyers would set about getting a deep mode shade with nothing but pure primary colors. On the other hand, it is necessary that the number of secondary and tertiary colors in stock should be kept as low as possible. Cases could be cited where sixty or seventy different dyes were in stock for regular dyeing of mode shades on one class of goods only when a dozen or so well-chosen dyes would have done the work. Such an excessive stock means bad stock bad economy, and often worse results in dyeing. It should be remembered that while some of the best matchers use most complicated mixtures of dyes for getting their shades, they rely mainly on two or three of the dyes for the body of the shade, the others being used to touch it off this way or that for a perfect shadingup. It needs an expert to control a large number of dyes like this. It should be remembered that every primary color is under direct control, but secondary colors are not. In using an orange dye you cannot avoid using, as it were, two colors at once—red and yellow, in an indefinite mixture. What opinion would be formed of a dyer who deliberately mixed up a stock of yellow and red dyes in unknown amounts for use as an orange which orange dye he then

used instead of the red and yellow separately as each might be needed, often dyeing along with five or six other dyes, some of them similar mixtures? Yet this is a fair example of what an unlimited use of secondary and tertiary dyes means, and many of the so-called new brands of the color firms are simply special mixtures of old dyes to meet the demand for any and every shade. While it pays the color makers to do this, it does not pay the dyer to use these mixtures in most cases, for he might as well mix dyes in the bath and know what he is using as work in the dark with such dyes. Other points occur in connection with this subject, but it is difficult to make oneself clear in discussing the topic quite generally apart from some particular case. One may say, however, that the well established system of adulteration practised by the color firms shows signs of giving way at some points. The demand for concentrated brands is being met, and that is a healthy sign. It is obviously uneconomical to have to pay for a dye-powder being diluted to about half its real strength in order to pay a cheap price per pound.

By securing the best possible exhaustion of baths before running off, economy is satisfied. The use of the newer assistants, such as lactic acid bodies in chroming, has been largely fostered by the desire for saving chrome. Perhaps in the past chrome has been wasted as much as any other dyer's drug. Standing bichrome baths give up only half their chrome to wool, and an addition of sulphuric acid is necessary to revive baths which have become greenish—i. e., overcharged with potassium chromate which will not mordant wool. Space does not allow of the discussion of many examples, but the following illustrate the value of chemical knowledge in getting economical results with various baths: (a) In using tartaremetic baths for fixing tannin mordants, the fixing bath becomes gradually acid as antimony is taken up. This acidity will hinder the further exhaustion of the bath unless neutralised from time to time—e. g. with a little soda. (b) The successful use of the newer bleaching agents, of malt extracts, etc., is largely a matter of economy through proper chemical control.

All peroxide baths and per-bleaching baths generally should be made slightly acid when not in use, and excessive wastage prevented. It has been claimed that electrolytic bleach has not so good keeping properties as hypochlorite of soda made up from bleaching powder and soda crystals. Electrolytic bleach can be made to have the same keeping properties by adding some sodium carbonate to it, if necessary.

There are cases where a little adjustment makes all the difference in economy.

2. Economy in steam introduces factors such as the quality of water

(Continued on Page 8.)



# Preparation of Warps for Weaving

## Contest Progressing.

The contest is progressing slowly as there are thirty-nine articles in all and it will require several weeks longer to complete them.

Those who are reading the articles should remember the guessing prize of \$2.00, as it cost nothing to make a guess.

## Number Eighteen.

I will try to give an article on preparing warps for the looms, and as spinning is not to be considered, I will start at the spooling. Now in my opinion, spooling is one process of manufacture that should have more consideration than it usually gets. The baskets on every spooler side should be set with the same angle and the guides for each number of yarn should be set to the same gauge. We can take the four-leaf card gauge and find settings for numbers from 10s to 26s. I do not believe in setting spooler guides close enough to chafe the yarn on account of bad carding or spinning, for we cannot do the carding at the spoolers.

Every spooler room, in my opinion, should have a very skilled man in charge, one who will not allow a variation of over two numbers of yarn to be spooled without resetting the guides, for this is the place where the yarn gets its first strain after leaving the spinning. Spooler tenders should be supplied with the very best knotters and keep them in good shape.

Now we will go to the twister. This man should be a very skilled and watchful man, one who will see that every part of the machinery and every hand does their full duty. Here we can do great damage to the warp. Every spindle in the twister creel should be set so as to give every spool the same tension, so that each strand of any ply yarn will reach the steel rolls exactly alike. This will prevent the twisted yarn being laid together with slack and tight threads. There is no other place at which these threads can be adjusted. If they leave the twister in this shape, they will certainly reach the loom the same way. Another important feature of this room is the oiling. If the man on the job does not do the oiling right it will cause the spindles to vibrate, making soft twisted ply yarn, which will cause trouble in various ways. A slack strand of

thread will show up in the warp and you can detect it right on into the cloth, and there will be a slack chafed streak through the duck and a great many times it will be greasy on account of rubbing the ring and it gives the beam hand and weaver trouble from start to finish. With the proper men at the above positions, all this can be avoided. The travelers, when properly looked after, play an important part in preparing good even ply warps.

I should want all travelers placed in a cupboard made for the purpose and only allow overseer and second hands to handle the key. If you allow Bill to have a 2-ply traveler and John a 6-ply traveler, the first thing you know Bill has some of John's travelers and John some of Bill's running on each other's frames. Consequently this will injure the warp, the goods, and will even injure the sale of the cloth. All of this is easily avoided if it is properly attended to.

The banding also in this room plays an important part in preparing good even twisted ply warp. We should not have one man tie on bands one week with a small knot and another man to tie them on with an unusually large knot. If we do this we will have soft twisted ply yarn and hardly know where it is coming from. It will cause ugly places in the cloth the same as weak places in the warp.

I prefer a band of uniform size and one which is small enough to get well in the groove of the whirr and small knots also. In my opinion if the men from the superintendent to the oiler will get behind these points and see that they are all carried out, the warps will leave the twisters in good shape.

Now we go to the beamers. This is a place where, in some cases, there is too much new and inexperienced help allowed, for here every man should be well up on the job. We should have a very careful foreman in this department. For instance if we use the creel beamer and ball warper, we would want our spindles in the creel in just such shape as we have mentioned of our twister creel spindles so as not to have loose threads jumping up in our cloth as slack ends usually do. This warp, as it is put on the wooden beams in ball form should have very careful attention as to the tension at which it is run. Do not allow five or ten yards wound too slack and do not allow any beamer tender to tie one or two broken strands of warp together. He should have a pair of shears made for the purpose al-

ways handy and trim all broken ends nicely before tying knots. This prevents breakage and also prevents tying-in of harness eyes by the weaver and the making of slip knots. After we have the warp prepared in ball form we should see that all ends are all laid in the reed just as the lease is taken before starting on the section beams. Right here we should certainly see that the balls all have the right tension so as to prohibit a part of the warps being run on the section beam loose and part tight, and also keep the ends from coming up crossed in the warp after it is being woven. In my opinion, if we will see that all of the above mentioned points are attended to, our warps will reach the loom in good shape.

I will now go back and try to give a few points on single warps. The warper, in my mind, is a very simple machine, still it is very important. Here we can get the same tension on our spools very easily, but may have spools on our creel running with a jumping motion—one moment tight enough to strain the yarn and the next going in in kinks. This is sometimes caused by allowing the use of bad spools, and other times on account of the fixer being careless. If this machine runs with the ends out of the drop wire it will pull the spools at varying speeds and cause the strand or strands to go in the warp, first tight enough to strain it and then in kinks just as the heavy sided spool will do. If this warp is allowed to go onto the beam this way it will reach the slasher in the same way and when these kinks have been sized they will be somewhat heavier and will break harness eyes, cause knots and gouts in the cloth, and break badly behind the loom. I hope the reader will understand my idea right here. These drop wires should be kept in such clean and perfect shape so that the warper will stop the very second that a strand breaks or happens in any way to get out of the drop wire. The drop wires cannot be kept too clean, for a little lint or trash can get lodged in such a way in these drop wires that it will not knock the machine off and we will have just as many warps as this set will make to come up an end or ends short at the loom, which causes great trouble to the weaver. The fixer will give the same trouble if he allows his machine to be operated without having every part in perfect shape.

So if the overseer and second hand will watch closely after the

fixer and warper tenders and the creels, they can easily avoid the troubles, which will be a great advantage to the weaver. With these defects eliminated, we should deliver warps to the slasher with all strands smooth and uniform in length.

Now we go to the slasher. This machine is one which cannot be too carefully operated, but I think in many cases it is carelessly operated. I will give my idea on a mixing of starch. Take 8 gallons starch, 2 gallons china clay, 4 pounds tallow, 1 quart spirits of turpentine. This is a mixing for light duck, such as 8 or 9 ounce. After this is mixed and put to boiling in a kettle the man who operates the slasher can act carelessly and greatly damage the warp and give the weaver a lot of trouble. He should see that the size is well boiled before he starts the machine early in the morning and then not start it off at too great a speed. If he is not very careful he will give the weavers some damp warps which will never run right if he tries to heat up the kettle too fast. In order to get to run the machine the first thing he knows his kettle is boiling over. He cuts the steam off entirely from the starch to stop it from running over. He forgets to turn the steam back on and after a while the starch becomes cold and lumpy. The paddle in the starch is overloaded so the belt drops off. Then he goes and turns the steam back on the kettle and looks at his size box, and warps and finds lumps in the size and on the warps and these will give a great deal of trouble to the weaver. All this can be avoided. I would suggest getting just enough steam as it takes to boil the kettle properly and place a soft low whistle on the steam valve at the kettle and then keep the cylinder at the proper heat. This will prevent the warp being run through thick, lumpy starch, and having the weavers worry and tug over damp warps.

In my opinion, if Mr. Overseer and Superintendent will get behind these defects, which can easily be done, Mr. Weaver will make better cloth and get better production.

Duck.

## Number Nineteen.

Spooling is the first process through which the yarn passes on its way to the loom after having been spun. The spooling machine is one of the most simple in the whole mill and yet it is capable of spooling a large amount of yarn and

# W. H. BIGELOW

AGENTS FOR

## ASHWORTH BROTHERS

### Tempered and Side Ground Card Clothing

Tops Reclothed. Lickerins Rewound. Cotton Mill Machinery Repaired.

12 to 18 West 4th St., Charlotte, N. C.

240 River Street, Greenville, S. C.

127 Central Avenue, Atlanta, Ga.



being the cause of quite a lot of trouble and bad work in the processes that follow. For instance, if the guide soil is allowed to get out of true and the spools are larger at one end than at the other—it will cause a large number of breaks at the warper and some of these breaks may cause lost ends and crossed ends on the section beam. Hence the bad work is passed on to the slasher and from the slasher to the loom. The bobbin holders on the spooler should all be set alike and should be set so as to put just as little strain on the yarn as possible, consistent with a well built, firmly wound spool. In other words, the elasticity of the yarn should be preserved as much as possible. This is especially true of medium and fine yarns, but is not so important on coarse yarns.

The guides should be set close enough to arrest all large gouts, but should not be set so close that they will scrape and weaken the yarn. The spool should be wound barrel shape and should not be softer at the ends than at other points.

The knotters should be carefully watched and the blades kept sharp. A knot improperly tied will slip and make much trouble for the weaver.

#### Warping.

Fine yarns should not be wound on large heavy spools, because of the great strain that is put on the yarn when being run off at the warper. The yarn is not only weakened by losing much of its elasticity, but many of the threads will break, causing the machine to lose production and allowing a chance for bad work. However, we often have to take conditions as we find them, and not as they should be. Where a mill is compelled to use heavy spools for fine yarn, the difficulty can be partly overcome by keeping all the skewers in good condition and by having a few hundred extra skewers so that the skewers can be taken out occasionally and soaked in melted tallow.

The yarn often breaks while passing from the spool to the beam, and in order to make good work the machine should stop quickly. Therefore the stop-motion, whether mechanical or electric, should be kept in perfect condition. When the warper tender goes to put the thread back into place she sometimes spreads the yarn open two or three inches. This causes trouble at the slasher—causing bad work which is passed on to the loom. More work for the weaver, low production and seconds, the result. The same is true if the girl fails to get the end up straight, or crossed under another thread. Some mills have changed their warpers to run backwards so that the yarn will wind on from the back side, in order to remove the necessity of spreading the yarn open while getting up an end.

A few years ago I took charge of some warpers in a mill that was making a class of heavy colored goods dyed in the raw stock, and I had not been in charge long when the slasher man called my attention to an evil that had existed for several years and it seemed that nothing that could be done would get it right. He took me to the slashers and showed me several beams that seemed to be made as near right as the warpers could make them and yet the yarn on one side of the beam was pulling very tightly while the yarn on the other side of the same beam was so slack that it would break out at the split rods in front. I secured a large pair of calipers and took the size of the beams at each side and found that one side was fully one inch larger

in diameter than the other. The trouble was found to be in the warper combs. It seems that several years prior to this that some one had taken all the combs apart to clean them out and had put them back together in a very careless way, and out of the 19 warpers only six of them were right, while five of them had a difference of three inches from the center reed of the comb to the outer reed. In other words starting from the center of the comb, one-half of it opened out three inches and caused the threads on the shorter half to lay closer together and thereby make that side of the beam larger than the other side. They had been trying to overcome the trouble on the slasher by putting extra tension on the beams thereby stretching the ends on the tight side almost to the breaking point. The cause was removed and the work improved at once.

#### Sizing.

Sizing warps for weaving is possibly one of the deepest subjects connected with the manufacture of any kind of cotton cloth, because there are so many conditions to be considered when making the size. For instance, warps are sized to make them weave well and to assist the yarn in resisting the chafing of the harness eyes and the reed as well as the chafing of the threads against each other. So it can be very readily seen that when a warp is to be woven with a heavy sley or a close pick there will be more chafing of the yarn and consequently it will require a stronger size to make it weave well than would be required for a cloth of light sley and pick. The same is true of different kinds of yarn. A fine yarn requires a stronger or better size than a coarse yarn, and a soft twisted yarn will require more sizing than a hard twisted yarn, while ply yarns can be woven with very little size. In fact, they are sometimes woven without any size at all.

Again the sizing should be made, or the materials composing the size should be chosen, with a clear knowledge of their chemical nature, as there are some things that are very valuable in helping to make the warps weave well, but would cause trouble in some of the after-processes. For instance, if the cloth is to be bleached it will not do to use any softener containing beeswax, paraffine wax, or Japan wax as these materials resist the bleaching process and will cause grey streaks to appear in the cloth. Manganese chloride is also a very valuable ingredient for attracting moisture but it can't be used in the size when the goods are to be catinized. These are only a few of the points that a good size maker should know but lack of space forbids greater detail.

Both corn starch and potato starch are extensively used in making size but as corn starch is the cheapest it is nearly always used on coarse and medium yarns. Tallow is mostly used as a softener and if it is pure there are very few if any substances that are superior to it. Excellent results can be obtained from size made from the two ingredients just named. The principal thing to know is how much of each substance to use and how to cook it. If I was called on to start up a mill making from 12's to 24's yarn, medium sley and pick, I would start with the following formula, considering their size kettles to be of 250 gallons capacity:

Water, 150 gallons.  
Corn starch, 90 pounds.  
Tallow, 12 pounds.  
Boil for one hour, then fill up

kettle to 250 gallons. In making size from any kind of formula it is better to start with less water than is actually required in order to allow for the condensing of the steam while boiling. Then after the boiling is done, enough water can be added to make up the deficiency. After sizing a few warps with this size I would keep a close watch on the weaving and if it showed that the warps were too soft, I would increase my starch and tallow about 10 per cent. If the warps seemed to be brittle I would increase the softening material, but not the starch.

A little chloride of zinc added to the size will not help the weaving but will keep the cloth from mildewing when stored away.

It is impossible to give a receipt that will fit all conditions, but even a poor size can be made to do good work if it is well cooked, and kept boiling hot while the yarn is passing through it.

When the beams are put on the slashers it should be seen to that all of the beam heads are in line, if they are not in line, the sharp edge of one beam chafing against the yarn from another beam will cause much trouble and this will give the weaver a bad selvaige to contend with. There should be just sufficient tension on weights put on the beams to hold the yarn straight and to prevent the beams running forward when the machine stopped and no more. One of the next most important things to look after is the squeeze rolls. In starting up a new set of squeeze rolls they should first be well coated with white lead paint and then covered with several rounds of sheeting. The object of the lead paint is to protect the iron rolls from moisture as much as possible, and to hold the cloth firmly on the roll. I once saw a mill where this had been neglected and it was only a short time until the rust had made many low places in the rollers and it was impossible to squeeze the yarn out thoroughly. Damp spots in the warps was the result.

Some slasher cloth will become hard and fail to do good work after it has been used a while, but it can be restored to very good conditions by taking it off and soaking it in hot water. The cloth should be put on with care so that there will be no wrinkles.

When a loom beam is started on, the slasher it should be seen to that the sheet of warp runs evenly on the whole surface. That the selvages should come evenly against each head and not fill. The press roll should set evenly against the yarn and should extend the full length of the beam. The yarn should be wound on the beam firmly, but care should be taken to put just as little strain on the yarn as possible, consistent with a firmly wound beam. Too much tension at this point destroys the elasticity of the yarn and hinders good weaving.

I want to say in conclusion that a man that keeps his slasher clean, and keeps all moving parts well oiled and all valves well packed and

in good condition generally will soon learn the best way to run a slasher and can be depended on to get good results. A large book could be written on the slasher alone, but I have chosen to mention only such points that have been most helpful to me.

Progressive.

#### Number Twenty.

There is no one process in a cotton mill that should receive more attention and consideration than the preparation of warp yarn. The three main requisites are good cotton, good carding and good spinning. Without either of the above, bad results in the weaving will be the consequence.

As long as the subject to be discussed does not go any further back than the spinning we will take up the spooler first. The spooler is one of the most simple machines in a cotton mill and one that will give the most trouble if not looked after properly.

One of the main points of a spooler is to have the traverse just right. When I say just right I mean for it to be set so that it will build up the right kind of a spool from the empty spool to the full spool. The yarn should never go to the head of the spool. If the yarn during the up and down motion of the traverse touches the head of the spool it will build up too high at the head and the spool will not hold the amount of yarn that it was intended to hold, and besides it will make a very unsightly spool.

In setting the spooler traverse for Nos. 19 to 20's yarn the yarn should lack about 1/32 to 1/16 of an inch from touching the head of the spool. If the traverse doesn't have too much lost motion and doesn't dwell too long on the change will make a nice oval spool that will unwind well on the warper. And on the other hand if the traverse is too short and doesn't go near enough to the head of the spool the spool will be soft at each end and will run bad on the warper. The ends will be continually falling down between the yarn and the head of the spool and will cause a large amount of annoyance and lost time on the warper as well as a lot of unnecessary waste.

The spooler guides should be set so they will stop all lumps and knots that are too large. But it is not a good idea to make the spooler guides do what should be done in the spinning room.

The spooler help should be taught never to loop ends on the spooler or to never put the short spool to be filled on the wrong way. Either error will cause trouble on the warper.

The knotters should be looked after closely. They should be cleaned up at regular intervals and oiled. They sometimes get out of fix and tie slip knots that will cause trouble on warpers, as well as loss in production.

The size of the spools play an im-

#### Guessing Blank.

I guess that the contest article signed \_\_\_\_\_

will win first prize.

Name \_\_\_\_\_

Address \_\_\_\_\_



portant part in warp preparation. For No. 20's on down a 6x4 spool is O. K., but from No. 20's up to 30's a 5x4 spool will give the best results. A 6x4 spool filled with 24's to 30's is too heavy for the yarn to run well on the warper, and will subject the yarn to too great a strain, which destroys its elasticity. This is one of the main factors in a good weaving yarn. The strength of a yarn depends on its ability to stretch a certain amount without breaking. Some claim that 36 inches of yarn should stretch to 38 inches before it breaks.

In creeling the warper it is best to leave out the bottom line of spools, if possible, as on account of their proximity to the floor, they will pick up flyings that collect under them. This causes the drop wire to clog and break the ends. Even should this foreign material go through the drop wires and on over the slasher without giving trouble, it will cause trouble on the loom. If the slubs do not catch in the harness eye, they will be likely to cause the ends to break when they come in contact with the reeds.

The amount of ends to creel into a warper has to be determined from the class of goods to be made. It is always best to use an even number of beams on the slasher. The set for the slasher should consist of two, four, six or eight beams. An odd number of beams does not make well on account of the large lease rod on the slasher. The lease rod is intended to separate the yarn evenly; that is, there should be the same number of ends under the rod as over it, and if a set is used with an odd number of beams, there will be more yarn on one side of the rod than on the other. It is very important that the yarn should split evenly.

There are a number of yarn softeners on the market, such as tallow, soluble oils, etc. Any agency that will soften the yarn without destroying its elasticity may be considered good.

There are very nearly as many sizing compounds on the market as there are people that use them. Every concern will guarantee its compound to be better than the other fellows, and they are willing to make an expensive effort to prove it. But the best sizing compound to use is one that will give good results in the weaving, a compound that will give a maximum of production with a minimum of waste and breaks in the weaving, with a reasonable cost is the compound to use. If the weaving is running good and you are getting a good production, with a set of contented weavers, it isn't a good idea to change compounds.

The tension on the slasher has a lot to do with good running in the weaving. There should be just enough tension between the copper rolls in the size box and the large delivery roll on the front of the slasher to cause the yarn to separate behind the first or large lease rod. If the tension is so great as to cause the yarn to separate too far back behind the large lease rod, it will weaken the yarn, and the ends will be continually breaking.

The sizing kettle and sizing box should be kept clean, as well as free from scale and hard lumps. The water pipe that furnishes water for the kettle should be examined often. This pipe will rust and scales will oftentimes come into the size along with the water and go on into the size box on the slasher, and this will be liable to give any amount of trouble, such as leaving stains on the cloth that will cause the goods to be thrown into seconds.

The number of ends to be layed in the dents on the slasher comb is very important. There should be neither too many nor too few ends per dent, and every dent should have the same number.

There is a slasher as well as a warper comb that can be had with two rows of reeds. The front row should be set at an angle of about 45 degrees, which is bound to make a decided improvement on the slasher, and an even greater improvement on the warper. The 45-degree angle at which the front row of reeds is set will keep the yarn from rolling and falling, and will cause it to rewind with a more even tension.

It is also very important not to fill the section beams too full. If they are filling up above the head of the beam, they will have to be combed in, and will not run well on the slasher until the combed-in part has been run off. Then again, if the beams are too full, and the floor on which they are laid is dirty, the yarn, of course, will be soiled.

The amount of steam pressure on the slasher has considerable to do with good running work in the weaving. Just enough steam to dry the warp is sufficient. If the yarn could be taken from the slasher slightly moist (just so it would not mildew on the loom beam) it would run much better.

The length of time allowed for cooking the sizing seems to vary with different mills. Some mills cook it thirty minutes, some forty-five, and some even longer. But the majority of mills have adopted the 45-minute rule.

It does not seem to be good practice to increase the amount of size on the warp to save cotton; what is saved in weight is lost in the production.

I guess there will be as many different ideas expressed on warp preparation as there will be articles written on the subject, but it may be well to remember that there is no one person who knows it all. We all learn something every day. The stock used and the class of goods to be made, and the different conditions to be met with in different cases, will have to be considered before definite conclusions can always be reached in warp preparation.

Ratine.

#### Number Twenty-One.

Spooling is a very important part in warp preparation, it should be done with care. All spooler hands should be instructed about long knots, also the spooler guides should be set so as to knock out all the gouts and lumps that come up on the yarn, and somebody should see that these guides are kept in shape and see that the spooler hands run the ends in the guides and not over them. Some makes of spoolers have a guide that can be propped up with a little piece of waste. This is a great evil for it will allow all long knots and gouts to go through. Warping done incorrectly gives all kind of trouble in slashing. If you put a hand on warpers you should require good work from them same as you do your weavers. Also when you put them on the job, let them run it, and not have the tying-in hands helping them, for if you do you will have bad work and the warper hand will say, "I did not make it, the tying-in hand did it," and she or he has room to get out of it. Bad work is caused very often by warpers not being kept in adjustment, or the rolls in working order.

Now as we come to the slashing

we all know that yarn for bleaching or dyeing should contain but very little size; but, at the same time, we must have enough to make our weaving run the best we can. Now the most important thing in sizing warps is starch, and as there are several kinds of starch, we should have a starch that the manufacturer has not taken out all of the adhesive qualities, in other words a starch that might be termed a by-product of pure starch—all the compounds you may use will be insufficient to make it adhere to the yarn and give good results in weaving. Instead of being an absorbent of moisture it will gum and tend to be sticky on the yarn, providing you have sufficient humidity in your room, and if you reduce your humidity it will crumble and fall on the floor.

Then something must be done to help the starch adhere to the yarn. We use compound—some use one kind, some another. There are several different kinds that are good. Then we must have some thing to act as a softener, the best of which are concrete fat of animals, not chemicals, etc., the composition being solid fat and oil.

Each molecule of starch may be represented by a small box, the walls of which require a higher temperature to melt them than the center, or atoms of the molecule.

In cooking the size you will notice just as the mixture comes to a boil (212 degrees) it seems to swell in the kettle, this is when the molecules of starch burst. The inside atoms are ready for use, but the walls, being harder, are not. It takes at least thirty minutes after coming to a boil before the walls are melted and the mixture is thoroughly cooked and ready for use. The more moisture you can cause your size to attract, without mildewing, the better your weaving will run. The yarn will be more elastic and your cloth feels better. Slashers should be run as slow as possible as this will allow the yarn more time immersed in the size also takes much less steam. You should run with just as little steam as possible so warp will not mildew. You will have less starch knocked off in weaving, regardless of the sizing you are using. Slasher clothes should be taken off at least twice

a week and put in tub or bucket of water and let stand over night, and next morning washed out. This will keep the blanket from being hard. If it is not washed and the size is let dry in it too long, it will leave the yarn flat with rough edges on it, which, of course, will make weaving run bad. If you care for your blankets by washing them at the proper time, it will give a cushion to the yarn and leave it round and will weave much better.

Now, as we pass on to the tying-in machine, the first thing the warps should be taken from the looms in good shape, all ends in and all misdraws and doubles broken out. The warp man, or whoever takes the warp from the loom, should see that they are correct before doing so. If this is done, and the warp machine is in proper working order, and the operator does his duty, you will have a good straight warp to go back to weave room. There the fixer should do his part. He should have the loom in proper shape and tie the warp in with care and see that the harness is set right, and you will have a pretty good running warp.

—Pee Dee.

#### Economy in Dyeing.

(Continued from Page 5.)

used for boiler purposes, of fuel, etc., with which one cannot deal now. As indicating the attention recently given to economy in this direction, I would mention as significant the invention of the isothermal steam-control valve made by Messrs. J. Baldwin and Co., Kinghley. In the planning of a dye-house opportunity is given to make permanent economies in future working. One suggestion for a piece dyehouse containing, for example, winch machines, is that wherever possible two methods of driving should be available, the most economical being from the main mill shafting, but the second drive from a small donkey engine, allowing one to continue dyeing after the main shaft has stopped, this alternative presenting considerable advantage.

The modern tendency to use shorter baths results in a saving of

## H. W. Butterworth & Sons Co.

PHILADELPHIA, PA.

BUILDERS OF MODERN

### Bleaching, Dyeing, Drying, Finishing and Mercerizing Machinery

THE HIGHEST STANDARD BOTH  
IN DESIGN AND CONSTRUCTION

ESTIMATES FURNISHED

CORRESPONDENCE SOLICITED

A. H. WASHBURN, Southern Agent

Suite 800-806 Realty Building

CHARLOTTE, NORTH CAROLINA



Clark's Annual Spindle Increase List.  
(Continued from Page 3.)

Texas.	
None.	
Virginia.	
*Clinton Mills Company, Emporia.	5,000
Total For South.	
Alabama	14,648
Arkansas	1,480
Georgia	32,882
Kentucky	5,000
Maryland	25,600
Mississippi	
Missouri	
North Carolina	145,940
Oklahoma	
South Carolina	73,124
Tennessee	15,700
Texas	
Virginia	5,000
Total	319,410

steam. The value of certain patent dyeing machines is greatly increased by the saving in steam effected. Bound up with this matter is economy in labor and time. All shortening of dyeing processes results in a saving of steam and labor. The greatest of all economies is usually economy in time. A shorter dyeing period or more convenient handling of goods means increased output with the same plant and wages bill and practically the same steam bill. Wherever possible it represents the greatest economy. The fibres also are left in better condition when the dyeing treatment is not so lengthy. Dyeing, however, is a time-operation, and to get good results the time factor must have due consideration. In the realm of mordant dyeing, however, time economy has been rendered possible with little depreciation in value of the shades produced by the introduction of single-bath chrome dyes, dyed with the mordant added at the beginning. The fullest use should be made of this class of colors by the dyer engaged in the production of fast shades on wool if he wishes to effect a real saving. They may not meet every possible case, but the majority of shades of good fastness which used to be obtainable by only two baths may now be dyed in one only, with half the total time of treatment previously demanded.

There is at present a tendency to dye more and more with material in a compact form the dyeing of slubbing in top of cops and cheeses, saving making into hanks and re-winding. There are even attempts to size cotton in the warp bobbin form, and these have met with partial success, at any rate, as may also be said of bleaching in the bobbin form and on the beam. This style of treatment is demanded of the dyer in the interests of time economy. The patent dyeing machine has come to stay, and not only stay, but flourish. The number of different makes is now so great that familiarity with all its impossible. One need not make any invidious selections of examples, but may indicate the value of the chief principles of construction. In constructing a dyeing machine one may arrange: (1) For the liquor to circulate through the material; (2) for the material to circulate through the liquor. Or even both may take

place, as in the "Premier" dyeing machine. On the first principle are constructed the Obermaier, de Keukalaare, Psarski, Franklin, de Bliques, Esser, and Hussong machines, etc.

In judging the value of a machine for any special purpose it should be borne in mind: (a) That where material is greatly compressed while under the influence of hot dye-liquor it will never regain its original loftiness and spinning qualities. On the other hand, there is little liability of felting or stretching—e. g., of yarns. (b) Machines in which the material is completely hidden away during dyeing cannot be made to dye to a nicety in matching colors. (c) The circulation of liquor is liable to give rise to channels forming—it is always trying to find the easiest way through. If there is any easy way for liquor through the material it will come out unevenly dyed. Machines with a circulating pump which can be reversed are better as the reversal of flow generally stops channel formation in one direction. (d) Packing machines simply act as filters for liquor—and very good filters, etc. Dyestuffs, etc., used must therefore be in perfect solution, and the entire liquor used quite clear of particles. The machines on the packing system are more adaptable for various forms of material than any other. They have been used for the bleaching, sizing etc., mentioned previously.

Machines in which the material is moved through the liquor include the common winch pad, and jig. Kettle and beck dyeing also are on this principle. The patent machines of this class include the Klauder-Weldon and Cohnen machines and others. On the whole, machines of this type dye more evenly than the former, and are simpler to control, but are more liable to drag, fray, or felt materials, but not so liable to make them sad and heavy as packing machines. A new principle in hank dyeing was introduced recently in the Esser machine. The hanks are lifted from contact with the hank rod by the rush of liquor in flow. The Hussong machine is of similar type. This principle seems valuable in getting even results with a minimum of mechanical friction on the hank in dyeing. Machines of

(Continued on Page 15.)

## Our Spinning Rings SINGLE OR DOUBLE FLANGE

START EASIEST, RUN SMOOTHEST, WEAR LONGEST

### Pawtucket Spinning Ring Co.

CENTRAL FALLS, R. I.

## THE SEYDEL MFG. COMPANY

JERSEY CITY, N. J.



Sizings and Finishings

Soaps and Softeners

FOR ALL TEXTILES

## Southern Audit Company

(INCORPORATED)

### PUBLIC ACCOUNTANTS AND AUDITORS

OFFICES

901-903 Independence Building, Charlotte, N. C.  
811 Chamber of Commerce Bldg., Richmond, Va.

OFFICERS: C. L. SMITH, President and Treasurer  
JOHN W. TODD, Vice-President and Assistant Treasurer  
WALTER CHARNLEY, Secretary

## KNIT GOODS

The recognized technical authority of the hosiery, underwear and sweater trades, and the only American journal published in these lines. Contains authoritative articles on mill management, fashion developments, market conditions and trade news. Published on the 20th of the month

\$2.00 a Year  
Single Copies 25c.

ADVERTISING RATES  
\$2.00 an Inch

## THE HAIRE PUBLISHING CO.

PUBLISHERS OF

Dress Essentials : ; Knit Goods  
The Corset and Underwear Review

200 Fifth Avenue

New York City



# SOUTHERN TEXTILE BULLETIN

Offices: Room 912 Realty Building, Charlotte, N. C.

Published Every Thursday By

Clark Publishing Company

DAVID CLARK, Managing Editor

D. H. HILL, Jr., Associate Editor

## SUBSCRIPTION.

One year, payable in advance .....	\$1.00
Other countries in Postal Union .....	2.00
Single copies .....	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

## ADVERTISING.

Advertising rates furnished upon application.

Address all communications and make all drafts, checks and money orders payable to the Clark Publishing Company, Charlotte, N. C.

Entered as second class matter March 2nd, 1911, at the post office at Charlotte, N. C., under the Act of March 3d, 1879.

THURSDAY, JANUARY 7, 1915

## Will Address Child Labor Conference.

Our editor left on Tuesday night for Washington, D. C., where on Wednesday he addressed the National Conference on Child Labor.

It was no pleasant task to appear before that body, but we have become tired of the misrepresentations and false statements of the National Child Labor Committee and accepted this opportunity of entering a plea for a square deal for the cotton manufacturers.

We do not and never have advocated child labor but we demand that the true facts be presented instead of the false statements that have been so often circulated.

Besides the address of Mr. Clark the program contains addresses by Senator Robt. L. Owens of Oklahoma, and Wm. S. Kenyon of Iowa. Congressman Mitchell Palmer of Pennsylvania, and Victor Murdock of Kansas, numerous commissioners of labor and the full coterie of professional agitators, including last but not least, Dr. A. J. McKelway, who has been placed upon the program immediately following Mr. Clark, an arrangement that was doubtless made for a purpose.

The address of Mr. Clark will be published in our next issue.

## Southern Cotton Mills.

We have completed the Jan. 1st, 1915, edition of Clark's Directory of Southern Cotton Mills and give below the detailed figures compiled from same.

On page 3 of this issue will be found a list of the mills that have made increases in spindles during 1914.

The statistics we give below include all mills or addition that are now under construction and also include idle mills and are therefore slightly more than the spindles actually in operation.

The Jan. 1st, 1915, edition of Clark's Directory show that including idle mills and mills and additions under construction the following are correct statistics for the South.

Cotton Mills .....	761
Capital Stock .....	\$220,216,500
No. Spindles .....	13,478,297
No. Looms .....	274,069

There have been very few new mills started within the past year but an unusually large number of mills have made additions and the total of 319,000 spindles added is remarkable when we consider the unfavorable conditions that have pre-

valled especially since the war began on Aug. 1st.

This increase is not as large as in former years, but it shows a confidence in the future of the textile industry of the South that speaks well for future.

The figures by states are as follows:

	Cap. Stock	Spindles	Looms
Alabama .....	\$18,500,000	1,105,286	19,730
Arkansas .....	245,000	14,768	164
Georgia .....	37,520,000	2,210,528	43,953
Kentucky .....	1,765,000	103,308	1,357
Louisiana .....	2,300,000	81,500	2,304
Mississippi .....	2,870,000	185,376	4,841
Missouri .....	755,000	42,152	988
North Carolina .....	60,125,000	4,025,248	64,584
Oklahoma .....	227,500	5,712	
South Carolina .....	75,255,000	4,739,941	113,760
Tennessee .....	5,140,000	320,503	5,177
Texas .....	2,725,000	124,692	3,207
Virginia .....	12,819,000	519,286	14,004
Total .....	\$220,216,500	13,478,297	274,069

We are glad to see the additions made to existing plants rather than in the shape of new mills, for it means that they will be operated by experienced men and therefore the chance of success is vastly increased.

The additions seem very well divided between the States and indicate a uniform condition.

We hope and believe that 1915 will show a much larger increase as well as a return of prosperity.

## Japanese Cotton Mills.

Consul General George H. Scidmore, Yokohama, Japan, writes: To avoid the necessary consequences of the depression as a result of the war cotton men are reported by the "Japan Mail" of November 5 as having entered into an agreement for the renewal of the laying up of spindles for another six months.

On November 3 the representatives of the leading cotton mills met in Osaka to consider the suggested scheme for the renewed laying up of spindles. It was finally decided, in spite of the opposition of the larger mills, that the laying up of spindles will be renewed for another six months from February next. The regulations for the enforcement of the agreement are to be the same as at present, the only modification being that for the seven weeks from January 1, 1915, 10 per cent of all the spindles is to be laid up in addition to the present figures.

Egyptian raw cotton is indispensable for producing fine yarns, and 30,000 to 50,000 bales are imported annually. Owing to the war, says the Asahi of Osaka, shipment is difficult, as the cotton does not enjoy the benefits of the Government war risk rates unless shipped under special arrangements. Lloyds are charging 3 per cent for war risk,

which makes it difficult for Japanese merchants to import.

## The Cleaning-Up at Lindale.

Capt. Harry Meikleham, agent of the Massachusetts Mills and royal guaradian of all that abounds in the

city, is much elated over the progress he has so far made in cleaning-up the town—as he promised he would do—with the right co-operation, and in rounding up the boot-leggers.

One by one—it may be a bit slow—but is sure—he is rounding-up the whiskey sellers, in or around and about the city, and does not intend to stop until every one of them and all other "undesirables" have been dealt with and then he very likely will sleep with one eye open for any new ones that may crop out.

The people in the immediate bounds of Lindale are not giving any trouble, and it is not thought that they will. Agent Meikleham states that it is "outsiders" that he is watching—those who try to sell a little whiskey "on the side" and come into town in a drunken and disorderly condition.—Lindale Correspondent of Rome (Ga.) Tribune.

## A Home For Mill Bachelors.

J. W. Cannon, of Concord, N. C., will soon start the erection of a building in Kannapolis, N. C., to be known as the George Washington Inn. This will be a home for young men who come to the town to work in the mills and do not have families or homes in which to live. Some months ago a home was completed and known as The Martha Washington Inn, in which about 40 young women live who work in the mills in Kannapolis, and where they are looked after by a matron who has charge of the home. Like the Martha Washington Inn, the new home for young men will be equipped with all the modern conveniences, including water, lights, baths, sewerage, steam heat and well screened. The home for girls has running water in all of the rooms, with single beds, and the mill and bed linen, as well as towels, and pays for the laundry of the linen and steam heat. The home for boys will be modeled after the home for girls.





## "We find they stand Steam, Acid and Water just as represented."

"In regard to pliability and friction, would state that they are the best we have ever used, and have not called for any belt dressing of any description"

"These are the first belts we ever used that we did not have to take up or cut."

Thus writes the Superintendent of a big bleachery in Georgia, twenty-eight months after installing a complete equipment (\$3,000.00) of Spartan Steam-Proof Leather Belting.

Still further evidence of the satisfactory service rendered by Spartan Belting, lies in the fact that we have recently furnished this Superintendent another big Spartan Equipment for a large new mill.

There you have it!—conclusive proof—stronger than mere words can express—of the economy, efficiency, and complete satisfaction to be had from Spartan Leather Belting

The use of Spartan Belting in your mill is a guarantee to you of the same degree of satisfactory service. Just install a Spartan in your Bleachery, Dye House, Mercerizing Room—in fact, in any place where conditions are unusual—exposure to steam, water, chemical fumes, excessive heat, high speed with small pulleys, etc.

Remember we guarantee Spartan Belting to withstand exposure to water, steam, oil, chemical fumes, also that owing to its unusual pliability it will grip the pulley perfectly, run with less tension, and reduce the friction load.

Be sure to look for the Spartan Trade Mark—it is your protection and guarantee of absolute satisfaction.

*Interesting Spartan Book sent upon request, also our "Belting Manual",  
a 96-page book of useful mechanical rules and Belting information of  
interest to all belt users. May we send you these books?*

**THE GRATON & KNIGHT MANUFACTURING CO.**  
OAK LEATHER TANNERS AND BELT MAKERS  
WORCESTER, MASS.

#### BRANCHES

Atlanta Boston Chicago Cleveland Detroit  
Fall River Kansas City, Mo. Milwaukee  
Minneapolis Montreal, P. Q.



New York New Orleans Philadelphia Pittsburgh  
Portland, Ore. San Francisco Seattle  
St. Louis Tacoma

Selling Agents for Texas: THE GRATON & KNIGHT MFG. CO. OF TEXAS, Dallas, Texas





Arrangement of Motor Wiring and Control  
Switch for Finisher Picker  
Dunegan Mills, Greenville, S. C.



## Increased Production Quickly Secured by G-E Motors

If every machine in a textile mill were run at its highest productive capacity—operated at a steady speed to reduce wastage—and kept going without delays due to power causes, great profits could be realized from the present unusual condition of the market for this industry.

These conditions can be quickly and completely met by driving the machines with specially-designed G-E textile mill motors.

The electric motor drive for textile mills developed by the General Electric Company brings electric power and the productive machine together—does away with long lines of shafting and many belts, thus practically eliminating the possibility of delays due to power causes.

The engineers of the General Electric Company installed the first electric drive used in textile mills and have supplied a great majority of those used since. This vast experience is shown in each part of G-E motor drives which are specially built for textile mills in practically every detail—special motors, special controllers, special switches, special clutches, etc., etc. You are invited to avail yourself of this quick, highly-economical service to increase your production to meet unusual demands.

# GENERAL ELECTRIC COMPANY

General Office: Schenectady, N. Y.

### ADDRESS NEAREST OFFICE

Atlanta, Ga.	Duluth, Minn.	Niagara Falls, N. Y.
Baltimore, Md.	Elmira, N. Y.	Omaha, Neb.
Birmingham, Ala.	Erie, Pa.	Philadelphia, Pa.
Boise, Idaho	Fort Wayne, Ind.	Pittsburgh, Pa.
Boston, Mass.	Hartford, Conn.	Portland, Ore.
Buffalo, N. Y.	Indianapolis, Ind.	Providence, R. I.
Butte, Mont.	Jacksonville, Fla.	Richmond, Va.
Charleston, W. Va.	Joplin, Mo.	Rochester, N. Y.
Charlotte, N. C.	Kansas City, Mo.	St. Louis, Mo.
Chattanooga, Tenn.	Knoxville, Tenn.	Salt Lake City, Utah
Chicago, Ill.	Los Angeles, Cal.	San Francisco, Cal.
Cincinnati, Ohio	Louisville, Ky.	Schenectady, N. Y.
Cleveland, Ohio	Memphis, Tenn.	Seattle, Wash.
Columbus, Ohio	Milwaukee, Wis.	Spokane, Wash.
Dayton, Ohio	Minneapolis, Minn.	Springfield, Mass.
Denver, Colo.	Nashville, Tenn.	Syracuse, N. Y.
Des Moines, Iowa	New Haven, Conn.	Toledo, Ohio
Detroit, Mich.	New Orleans, La.	Washington, D. C.
(Office of Agent)	New York, N. Y.	Youngstown, Ohio

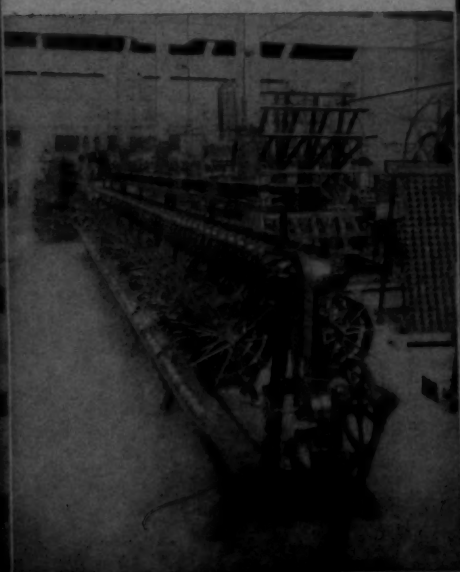
For Texas, Oklahoma and Arizona business refer to Southwest General Electric Co., (formerly Hobson Electric Co.), Dallas, El Paso, Houston and Oklahoma City. For Canadian business refer to Canadian General Electric Company, Ltd., Toronto, Ont.

6218



Continuous Running Motor Geared to  
Carpet Loom  
Bigelow Carpet Co., Clinton, Mass.

Induction Motor Geared to Winder  
Empire Silk Co., Wilkes-Barre, Pa.



25 H. P. G-E Motor Driving 124  
Knitting Machines  
Lion Manufacturing Co., St. Johnsville, N. Y.







Flour Products    Grain Storage    Flour Mill    Corn Starch Factory    Power House and Laboratories    Wheat Starch Factories

CORN-TAPIOCA-POTATO-WHEAT STARCHES AND FINISHING GUMS

THESE FACTORIES GUARANTEE THE QUALITY OF THEIR OUTPUT

**INDUSTRIAL STARCH CO.**

New England Agents  
SIZING STARCHES

**THE HURON MILLING CO.**

HARBOR BEACH, MICH.

CHICAGO    NEW YORK    BOSTON

**WALTER A. NIVLING**

53 State Street  
BOSTON, MASS.

Mgr. Mill Starch Dept.

Technical skill is at your service, together with experience from some of the best mills in the United States.  
Let us co-operate to meet your trade requirements.

## Clark's Directory of Southern Cotton Mills

SEVENTH EDITION JUST FROM THE PRESS

Brimfull of Dependable Information. :: \$1.00 the Copy. :: Better Send for Yours Today!

### SACO-LOWELL SHOPS TEXTILE SERVICE

**F**OR the convenience of our customers, we maintain in connection with our Charlotte office, a completely equipped shop, for the proper reclothing of Card Flats and Card Lickersin. Skilled experts are in charge and we invite you to avail yourselves of this service. A stock of card clothing constantly on hand enables us to supply all requirements promptly.

We are especially anxious that all our cards either Newton or Lowell pattern give satisfactory service and upon request will send expert to inspect cards and make such recommendations as may be necessary to put them in the very best possible shape.

**ROGERS W. DAVIS, SOUTHERN AGENT**  
**CHARLOTTE, N. C.**

### FILTERS

**O**UR Filter is designed to meet the most exacting requirements of the textile manufacturer. It will reclaim and render satisfactory for industrial purposes most waters which are considered beyond redemption. ¶It not only makes the water crystal clear and colorless, but puts it in the best possible condition for the most delicate processes of the dyer, the bleacher, and the finisher. ¶It has given satisfaction with some of the most highly polluted streams in the country, as well as those which are only slightly contaminated. ¶It is the one filter that will deliver an affluent of uniform quality at all times, and is made by a firm which has no other business than the purification of water.

#### SOME SOUTHERN CUSTOMERS

	Gals. per Day
Riverside and Dan River Cotton Mills, Danville, Va.....	8,000,000
Revolution Cotton Mills, Greensboro, N. C.....	1,300,000
Cliffside Mills, Cliffside, N. C.....	1,000,000
French Broad Mfg. Co., Asheville, N. C.....	1,000,000
Durham Hosiery Mills, Durham, N. C.....	700,000
Muscogee Mfg. Co., Columbus, Ga.....	750,000
Eagle & Phenix Mills, Columbus, Ga.....	200,000
Camperdown Mills, Greenville, S. C.....	50,000
Standard Processing Co., Chattanooga, Tenn.....	500,000
Cleveland Mill and Power Co., Lawndale, N. C.....	250,000
Appalachian Mills, Knoxville, Tenn.....	50,000
Holston Underwear Co., Knoxville, Tenn.....	50,000
Knoxville Knitting Mills, Knoxville, Tenn.....	50,000
Bibb Mfg. Co., Macon, Ga.....	300,000
Elliott Knitting Mills, Hickory, N. C.....	40,000

#### HUNGERFORD & TERRY, Inc.

Engineers and Manufacturers of Water Filters  
PENNSYLVANIA BUILDING, PHILADELPHIA, PA.  
Southern Agent, H. G. MAYES, Realty Bldg., Charlotte, N. C.



# Have you these Hand-books?



If not, we would like to send them to you.

You will find in them authoritative information on production problems, facts that you should know about textile machinery, and many valuable computation tables for daily use.

They also tell about the newest improvements in cotton machinery, improvements perfected by distinct organizations, specializing upon the several units from picker to loom.

Write us for the books you want.

## Pickers and Cards

Potter & Johnston Machine Company

## Roving and Drawing Frames

Woonsocket Machine and Press Company

## Warpers and Beamers

T. C. Entwistle Company

MANUFACTURERS EQUIPMENT COMPANY

NORTHERN REPRESENTATIVES

136 Federal Street, BOSTON.

## Spinning and Twisting Frames

Fales & Jenks Machine Company

## Spoolers, Reels and Spindles

Easton & Burnham Machine Company

J. H. MAYES,

SOUTHERN REPRESENTATIVE

Independence Building, CHARLOTTE, North Carolina



## ALBANY GREASE

gives better lubricating service at a lower cost on all kinds of mill machinery than anything else. Try it. Sample and cup will be sent.

Your dealer sells Albany Grease.

ALBANY LUBRICATING CO.,  
708-10 Washington Street, NEW YORK



CARDS,  
DRAWING,

COTTON  
MILL MACHINERY

SPINNING  
FRAMES,

MASON MACHINE WORKS

TAUNTON, MASS.

EDWIN HOWARD, Southern Agent

Greenville, S. C.

COMBERS,  
LAP MACHINES.

MULES,  
LOOMS.

## PERSONAL NEWS

C. S. Pitts has resigned as overseer of carding at Arista Mills, Winston-Salem, N. C.

W. O. Carter, spinner at Arista Mills, Winston-Salem, N. C., has taken charge of carding also.

P. L. West has resigned as superintendent of the Hermitage Mills, Camden, S. C.

F. G. Parker has resigned as superintendent of the Sterling Mills, Franklinton, N. C.

June Nichols will be overseer of spinning at the National Yarn Mills, Belmont, N. C.

E. D. Maynard has been promoted to superintendent of the Chronicle Mills, Belmont, N. C.

N. M. Neal has resigned as overseer of weaving at the Edna Mills, Reidsville, N. C.

B. W. Brown has resigned as master mechanic at the Clinton (S. C.) Mills.

C. H. Price of Gastonia, N. C., is now overseer of spinning at the Brown Mfg. Co., Concord, N. C.

Robt. Knighton has resigned as superintendent of the Puritan Cordage Co., Louisville, Ky., and is reported to be in very bad health.

Chas. H. White has accepted the position of superintendent of the Puritan Cordage Mills, Louisville, Ky.

J. M. W. Jenkins is to be superintendent of the Harborough Mill, Bessemer City, N. C., when it resumes operations.

T. B. Farmer has accepted the position of overseer of spinning at the Franklin Mills, Greer, S. C.

J. T. McGregor, superintendent of the Florence Mills, Forest City, N. C., has been visiting at Fort Mill, S. C.

J. A. Roberson has resigned as overseer of weaving at the Dilling Mill, King's Mountain, N. C., to accept a similar position at the Mecklenburg Mills, Charlotte, N. C.

J. W. Gilley has resigned as overseer of weaving at the Pickett Mills, High Point, N. C., to accept a similar position at the Edna Mills, Reidsville, N. C.

Henry W. Smith has resigned as overseer of weaving at the Riverside Mills, Worthville, N. C., to accept a similar position at the Pickett Mills, High Point, N. C.

C. E. Tucker has resigned as superintendent of the Chronicle Mills, Belmont, N. C., and will fill a similar position at the new National Yarn Mills, of the same place.

T. C. Wilson has resigned as superintendent of the Magnolia Mills, Charlotte, N. C., to accept a similar position with the Hermitage Mills, Camden, S. C.

C. T. Fallin has resigned as overseer of the cloth room at the Cannon Mills, Kannapolis, N. C., to accept a similar position at the Fulton Bag and Cotton Mills, Atlanta, Ga.

E. T. Carter has resigned as superintendent of the bleaching and finishing at the Cannon Mills, Kannapolis, N. C., and will fill another position with that company.

D. S. Mattox has resigned as overseer of carding at the Greer (S. C.) Mfg. Co., and accepted a similar position at the Walhalla (S. C.) Mills.

W. B. Wardell has resigned as overseer of carding at the Walhalla (S. C.) Mills and accepted a similar position at the Greer (S. C.) Mfg. Co.

Busbee has resigned as master mechanic at the Woodside Mills, Greenville, S. C., and accepted similar position at the Clinton Cotton Mill, Clinton, S. C.

Geo. S. Caine has resigned as superintendent of the Riverside Mills, Worthville, N. C., and has accepted the position of superintendent of the bleaching and finishing at the Cannon Mfg. Co., Kannapolis, N. C.

R. E. Henry has resigned as general superintendent of the Springstein Mills, Chester, the Fort Mill Mfg. Co., Fort Mill, S. C., to become manager of the Monaghan Mills division of the Parker Cotton Mills Co.

Adolf Eisseman, formerly assistant designer at Alta Vista (Va.) and the Patterson Mills, Roanoke Rapids, N. C., is now in the French army and in a letter to a friend written from the trenches on his knapsack, says that the fighting is terrible.

### Christmas Gifts and Dinners.

O. W. Whatley, overseer in the weave room, Union Cotton Mills, La-Fayette, Ga., received a nice office chair from his help. He also treated them with fruits.

C. H. Strickland, superintendent of the Belton (S. C.) Mills, was the host of an informal oyster supper at his home Friday evening. The delightful occasion was enjoyed by the overseers and other officials of the Belton Mills. Music was furnished during the evening by Charlie

Willingham. Mr. Bowie, Mr. Glasby, Mr. Griffin and Mrs. W. A. Clement. Among those present were Mr. and Mrs. P. L. Mitchell, J. B. Mitchell, C. M. Tolison, R. W. Austin, F. B. Young, G. D. Rogers, J. D. Rogers, C. O. Bowie, J. L. Glasby, Mr. Griffin and Mr. and Mrs. W. A. Clement.

On Saturday night, Dec. 19th, S. P. Bland, overseer weaving, Erlanger Mill, Lexington, N. C., gave an oyster supper and smoker for his fixers. Those present and enjoying the hospitality of Mr. and Mrs. Bland were Messrs. T. J. McLaniel, E. D. Moore, W. G. Freeman, J. B. Walker, G. B. Bland, A. H. Mauney, J. A. Henson, H. T. Evans, and J. W. Dagenhart, a most enjoyable evening was spent.

The weave room help presented Mr. Bland with a real nice overcoat, and Mr. McDaniel, second hand, with a nice Elgin watch in a gold case. All the other overseers received nice and useful presents from their help. At stopping time Xmas eve, every person employed in the mill was given theater tickets. Later a tree was held in the school house, Xmas eve, under the auspices of the Union Sunday School. Every member of the school, and every child in the village was remembered with a present. A bag of fruit, nuts, etc., were sent to every house in the village. At the Xmas entertainment a program of songs, recitations, etc., was carried out. The address on this occasion was by Prof. J. A. Gamewell of Wofford College, Spartanburg. Barring bad weather Erlanger had a great Xmas.

At the Jackson Mills, Monroe, N. C., J. W. Simpson, secretary and treasurer, was presented with traveling toilet set by the superintendent, overseers and general help of the mill.

(Continued on Page 16.)



## Cramer System of Air Conditioning

WITH OR WITHOUT

Automatic Regulation of Humidity and Temperature

Moderate in Cost

Cheap to Operate

Yields Big Returns

STUART W. CRAMER

CHARLOTTE,

NORTH CAROLINA



## MILL NEWS ITEMS OF INTEREST

**Apalachicola, Fla.**—The Chamber of Commerce here is planning to establish a knitting mill.

**Bristol, Tenn.**—The Board of Trade of Bristol is corresponding with manufacturers in Connecticut with a view of locating a 10,000 spindle cotton mill here.

**Henrietta, N. C.**—The Henrietta and Caroleen Mills have declared a semi-annual dividend of 3 per cent. The capital stock is \$1,500,000, the dividend checks aggregating \$45,000.

**Gastonia, N. C.**—The Flint and Arlington Mills are paying their usual 5 per cent semi-annual dividend. The Moroweb is paying this year its usual dividend of 5 per cent.

**Greenville, S. C.**—While Greenville has suffered to some extent by the war only one cotton mill in the city has seen fit to shorten hours and this mill only did so for about two weeks, several months ago.

**Austin, Texas.**—The Austin Knitting Mills have been incorporated with a capital stock of \$25,000. They will organize with E. A. Orchard, J. Lee Costley, T. H. Barrow as officers. They will install equipment for the manufacture of knit underwear and will later make knit hosiery.

**West Point, Ga.**—Annual statement of the Lanett Bleaching and Dye Works. President, George H. Lanier; treasurer, Justin E. Gale; directors, William H. Wellington and Horace S. Sears. Report of Oct. 31, 1914, shows: Assets—Real estate, \$60,000; machinery, \$60,000; merchandise, \$17,998; cash and debts receivable, \$18,747; total, \$156,745. Liabilities—Capital stock \$100,000; floating indebtedness, \$4,000; profit and loss, \$25,745; depreciation account, \$27,000; total, \$156,745.

**Augusta, Ga.**—The Sutherland Mfg. Company has paid a dividend of three per cent on bond of \$50,000.

**Lindale, Ga.**—The employees of the Lindale Mills have been notified that the mills will, until further notice, run sixty hours per week, starting in the morning at 6:30 o'clock and closing at night at 6:15, with 45 minutes at the noon hour for dinner. The mill will run Saturdays until 12:45 o'clock in the afternoon to make the sixty hours.

**Spartanburg, S. C.**—Saxon Mills and Inman Mills will pay their usual semi-annual dividends. This was decided at meetings of the directors of these corporations held Friday afternoon.

The Saxon Mill dividend is 4 per cent on its capital stock of \$300,000, or \$12,000.

Inman Mills will pay 3 1-2 per cent or \$5,250.

**Charlotte, N. C.**—The Highland Park Manufacturing Company of this city has declared a semi-annual dividend on its preferred stock of three per cent and on its common stock of five per cent. The capital of the corporation is \$643,100, the dividend checks aggregating approximately \$25,000.

The Elizabeth Mill of this city has declared its regular semi-annual dividend of five per cent on its capitalization of \$100,000, the dividend checks aggregating \$5,000.

**Newton, N. C.**—Supt. S. T. Gaddy of the Fidelity Hosiery Mills says that business is opening up splendidly and he is very confident that 1915 will be a good year in the hosiery business. This mill runs exclusively on ladies hose, but recently, on request of its New York agent, made samples of half-hose which have been sent to the supply department of one of the countries at war which is giving large orders for the soldiers.

**Langley, S. C.**—Following the filing of an intervenors' petition by minority stockholders, Judge H. A. M. Smith, in the United States Court at Charleston, has signed an order in the case of the W. H. Langley Co., of Augusta, Me., against the Langley Manufacturing Co., directing that the petition and exceptions be amended, and the answer be filed by the complainant within 10 days. Creditors may file testimony to support the bill until Jan. 31. Exceptions must be filed by Feb. 20 and the creditors' reply filed by March 3.

**Concord, N. C.**—A meeting of the stockholders of Brown Mfg. Co. was held Jan. 1st at the offices of the company at the Brown Mill. The reports of the officers of the company were received and a semi-annual dividend of 5 per cent was declared.

The officers of the company are: C. W. Johnson, president; F. J. Haywood, secretary and treasurer; W. A. Watson, W. W. Flowe, C. W. Johnson, Ed. Johnson, F. J. Haywood, J. P. Allison, E. F. White and J. F. Goodman, directors.

**Newberry, S. C.**—The banks and the cotton mills of the county declared their usual semi-annual dividends on January 1, and the dividend checks have been sent out.

The Mollohon Mill is now run one-half capacity at night and full capacity in the day. This is done in order to give employment to the unemployed.

A fire in the card room of Mollohon Mills Sunday evening at 6:30 did about \$700 damage, fully insured. It started in the cotton, and was caused either by a rat or by spontaneous combustion.

**Lexington, N. C.**—The Erlanger Cotton Gill, which is just completing its first year of operation here, is to be enlarged as previously noted and further details are given here. The capacity of the mill will be nearly doubled. When the extensions are made the mill will be 956 feet long, half of it two stories.

### A. KLIPSTEIN & COMPANY

644-52 Greenwich St., NEW YORK

Southern Office: Commercial National Bank Bldg, Charlotte

### DYESTUFFS and CHEMICALS

SIZING, BLEACHING AND FINISHING MATERIALS  
FAST VAT DYES—INDIGO

We carry a full line of General Supplies and make a specialty of equipping new mills

WE MANUFACTURE

Oak Tanned Leather Loom Harness,  
Belting. Weaving Reeds

AMERICAN SUPPLY COMPANY  
PROVIDENCE, R. I.

## WE HOLD OUR TRADE

By maintaining Quality and Uniformity.

By giving the Trade a Sizing that is ALL SIZING and absolutely no water used in its manufacture Our Chief Aim is to please our customers and produce better results for less money.

We have confidence enough in our goods to send sample barrel on approval, freight paid, and a practical man to demonstrate our claims.

THE KEEVER BROS. CO.,  
Manufacturers of "K. B." SPECIAL SIZING.

289 Market Street, NEWARK, N. J.



high; 15,400 spindles will be added, making 41,000 in all and 420 additional looms will be installed, making 1,100 in all.

Contemplated expenditures will almost reach \$500,000, and will mean a total investment for Erlanger Brothers of about \$1,500,000 in Lexington.

The contract for the extension has been let to W. Lee Harbin of this city, thus giving all of the work so far to local builders. Contracts have not yet been let for the 31 additional cottages that are to be constructed. Bids have been asked for. All of these new cottages are to be equipped with electric lights, water and sewerage connections.

**Martinsburg, W. Va.**—In the Federal Court here Judge Alston G. Dayton has just declared the estate of the late William H. Crawford of the Crawford Woolen Co. bankrupt and ruled that the petition in the matter was sufficient. In connection with the case Judge Dayton established a precedent in bankruptcy proceedings by ruling that an intervening petition in bankruptcy may be filed after the death of the alleged bankrupt.

The late William H. Crawford was president and owner of the Crawford Woolen Co., of this city, and after the company had been adjudicated a bankrupt by Judge Dayton suit was brought to adjudicate Mr. Crawford personally bankrupt. While the suit was pending Mr. Crawford died, and then an intervening petition was filed by another creditor. This intervening petition was contested by the heirs, but the ruling of Judge Dayton held that death did not abate the right to file such a petition.

**Charleston, S. C.**—Julius D. Koster, secretary of the Royal Mills, of Charleston, says that the plant is now consuming between 20 and 25 bales of cotton daily, as the raw material of its products, and employing in the process the labor of 226 employees. Families aggregating 500 members are at present living in the village of the Royal Mills. The four warehouses of the plant, with a capacity of between 3,000 and 4,000 bales, are practically filled.

Cotton bagging and sheeting of all qualities and sizes are being turned out at the Charleston cotton products factory, but chiefly staunch cotton bagging is being produced and shipped to firms throughout the country.

An idea of the demand for the cotton bagging of the local factory may be obtained from the fact that its output of high grade seamless bags has been ordered up to next June. An order for 30 bales of seamless sacks has just been received. Beans and fine seeds are shipped in them.

The fact that cheap cotton bagging



## No Shadows

One of the objections to humidifiers is the overhead piping which—especially in saw-tooth roofs—casts disagreeable shadows.

### THE TURBO HUMIDIFIER

has as a possible ramification its ring construction; the rings are around the posts and the piping all underneath, out of the way. No shadows with the Turbo Ring Construction. This may seem a minor detail, but it is one of the Turbo points that leads toward satisfied customers.

Get Turbofied—and satisfied.

### THE G. M. PARKS CO.

Fitchburg, Mass.

Southern Office Commercial Building, Charlotte, N. C.

J. S. COTHRAN, Manager.

## TEXTILE BOOKS

**Carding and Spinning**, by G. F. Ivey.—Price \$1.00. A practical book on carding and spinning which will be found useful.

**Carding Lessons for the Mill Boy**—Vaughan—Price \$1.00. A practical carder. Written especially for young carders.

**Cotton Mill Processes and Calculations**—By D. A. Tompkins—Price \$5.00. An elementary text book for textile schools and self-instruction. Every operation in the ordinary cotton mill is explained simply and with the use of illustrations. Contains much information of value to the experienced man. 395 pages; 33 illustrations; cloth.

**Plain Series of Cotton Spinning Calculations**—by Cook—\$1.00. A unique and valuable book giving the calculations used in mixing, carding, drawing, and spinning cotton, also original drawings showing points where changes of drafts, speeds, etc., should be made. Setting, production, doublings. 90 pages; freely illustrated; cloth.

### CLARK PUBLISHING COMPANY

CHARLOTTE, N. C.

has been put on the market hitherto, bagging suited only to light shipping, and that the initial cost of heavy cotton wrapping is greater than that of burlap, has thus far placed the prospective shipper beyond the arguments of the advocates of cotton bagging and wrapping.

However, the cotton wrapper disciple continues to point out the fact that cotton bagging is cheaper because it is stronger and can be used for more than one shipping; that it is clean stuff, which can be converted into toweling or even clothing, such as aprons and overalls. They call attention to the fact that the Southern rice planters of Texas and Louisiana in a section which is calling for aid in the presence of its surplus cotton, are shipping rice in East Indian burlap, in lieu of stronger, ultimately cheaper and more satisfactory cotton wrapping.

Speaking of the heavier baggings of the Royal Mills, Mr. Koster stated that an order would be shortly shipped to a large Western concern of one solid car-load of heavy cotton bags, capacity one barrel each, for shipping flour to Europe. A carload means 30,000 of these sacks. Only recently single orders for as many as 10,000 and 5,000 grits sacks have been received from Middle Western firms.

Practically no cotton baling for cotton has been sold by the Royal Mills. Shortly after the outbreak of the European war, when it appeared that the supply of burlap had been cut off from East India, and that a finishing blow to the burlap trade was impending in the shape of a protective tariff by this country, orders for heavy cotton bagging were submitted by shoppers in many industries, to a number of American cotton mills. Since the resumption of the burlap import, however, the former 75 to 80 per cent of American shipped goods that could not only be shipped but could be shipped to better advantage in cotton have gone back to the first love—burlap.

### Tragedy in Superintendent's Home.

Little Mattie Lee Stainaker, nine-years old, was accidentally shot and killed while playing at the home of Superintendent W. T. Storey, of the Ninety-Six (S. C.) Cotton Mill. The little girl with William Fleming, nine years old, Harold Storey, five years old, and Annie Storey, nine years old, were playing in a room upstairs at the Storey home. The children were so distressed and terrified they could not tell just him the terrible accident happened, but in some way one of them had hold of a pistol in one of the bureau drawers and it was discharged, the ball penetrating the brain of the little girl. Death was instantaneous.

## AMERICAN MOISTENING COMPANY

BOSTON, MASSACHUSETTS

WILLIAM FIRTH, President

FRANK B. COMINS, Vice-Pres. and Treas.

THE ONLY PERFECT SYSTEM OF AIR MOISTENING  
COMINS SECTIONAL HUMIDIFIER

JOHN HILL, Southern Representative, 1014 Healy Building, ATLANTA, GEORGIA



## Cotton Goods Report

New York.—The closing of the old year found prices on staple cotton goods on a firmer basis. It is said that well informed buyers and large distributors have covered ahead to a moderate extent, though some have held back contracts until the first of the year. It is evident that those who have not covered will have to pay advanced prices.

Manufacturers are now of the opinion that there is less chance of lower prices than there was two months ago. As the cotton goods and cotton yarn markets are showing such firmness at the present time it indicates that there is an underlying belief that prices have reached rock bottom and that they will be advanced early in this month.

The holiday in the gray goods market last week caused small sales, with practically no change in prices. Buyers were going over the past year's business and placed very few orders. Although the demand has been quiet, the market is holding firm in price, and the strength in the cotton market is giving a firm tone to the cloth market.

Manufacturers of colored cottons are going ahead with what dyes they have on hand and when certain colors are short, they are substituting others that seem to be fairly satisfactory. Southern staple ginghams were firmer last week, with advances named on some lines.

The exports of cotton goods last week through the regular channels were small in volume. From the Red Sea district there were only a few orders for sheeting. American manufacturers are expecting larger business from this quarter now that the competition from Austria as a supply market has been cut off. Stocks there are not thought to be very large, and when they get down to normal an active demand is looked for. Some of the Far Eastern markets are depressed, owing to the fact that they have on hand large supplies of high price goods.

Improved trading was seen in the Fall River print cloth market last week and the total sales were about 100,000 pieces. Slight advances were noted on some styles. The wide styles remained in the best demand and there was practically no call for narrow goods. The inquiry for sateens was better and more sales were made than any time within many weeks. Buyers are ready to go ahead on large orders at the present prices, but mill men here are not inclined to accept them. The latter agree that the low level has been reached, and are reluctant to trade until they can secure better prices.

Prices on cotton goods were quoted in New York last week as follows:

Print cloth, 28-in, std.	2 7-8	—
28-inch, 64x60s	2 5-8	—
Gray gds, 39-in. 68x72s	4 3-8	—
38 1-2-inch, 64x64s	3 7-8	—
4-yard, 80x80s	5 3-4	—
Brown drills, std.	6 1-4	6 3-4
Sheetings, So. std.	6	6 1-4
3-yard, 48x48s	5 1-2	5 3-4

4-yard, 56x60s	4 1-4	4 1-2
7-yard, 48x48s	4 1-4	—
4 1-2-yard, 44x44s	3 7-8	—
5-yard, 48x48s	3 1-2	—
Denims, 9-ounce	12 1-2	16
Stark, 8 1-2-oz., duck	14	—
Hartford, 11-oz., 40-in., duck	16 1-2	—
Ticking, 8-ounce	12 1-2	—
Standard prints	4 1-2	—
Standard ginghams	6 1-4	—
Fine dress ginghams	7 1-2	9 1-4
Kid finished cambrics	3 3-4	4

### Cotton Goods Trade of Canton, China

While native dealers say that the quality of American cotton goods is superior to that of European textiles, the former are too expensive and too heavy to warrant an increased demand in this semitropical climate. Moreover, American goods contain very little sizing and do not attract the eye of buyers, who prefer the kinds that look better and are put up in a more attractive style than the American goods, apart from the fact that they are sold cheaper.

### Importing Houses—Business Methods.

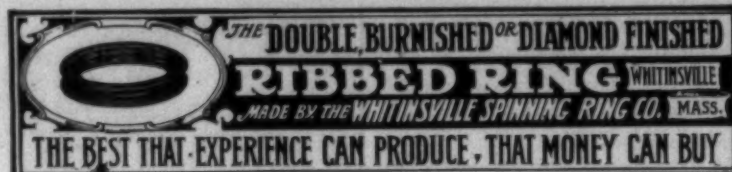
There are at Canton seven German and seven British firms importing piece goods. A large number of Japanese here are also pushing their trade in these manufactures, but there is no American firm in Canton doing this kind of business. The cotton piece-goods trade in Canton is chiefly in the hands of the German firms, which engage native salesmen, known as "brokers," who constantly canvass the market for orders, taking samples of European goods. Special attention is given to new designs that the Chinese customers may want.

The Canton buyers of piece goods pay little attention to the country supplying the goods so long as the order given to the foreign firm is carried out in accordance with their wishes. If the American manufacturers supplied goods similar to those manufactured in Europe and Japan, adapted to a semitropical climate, there is no reason why there should not be a market for them; but American firms should be established here in a position to do business upon the same terms as their competitors.

The merchant must assure the native buyer of the laid-down cost of goods imported, e. i. f., Canton, and must carry out orders in every detail to prevent complaint from the native buyer on the arrival of the goods.—Consular Reports.

### Original.

A man wished to have something original on his wife's headstone and hit upon, "Lord, she was Thine." He had his own ideas of the size of the letters and the space between words, and gave instructions to the stonemason. The latter carried them out all right, except that he could not get the "e" in "Thine."—Ex.



### WE MAKE THE BEST

Spinning  
and Twisting

TRAVELERS

Of Every  
Description

AMOS M. BOWEN, Treas.  
Providence, R. I.

Southern Representative  
MATTHIAS OUSLEY, Jr.  
Box 126, Greenville, S. C.

## GRINNELL WILLIS & COMPANY

44-46 Leonard Street, New York

### SELLING AGENTS

BROWN AND BLEACHED COTTON GOODS FOR HOME EXPORT MARKETS

## RICHARD A. BLYTHE

(INCORPORATED)

Cotton Yarns Mercerized and Natural

ALL NUMBERS

505-506 Mariner and Merchant Building

PHILADELPHIA, PA.

## The Desirability of the South

as the place to manufacture cotton goods is illustrated in the increase of 67% quoted by census department. We can offer attractive situations for those desiring to enter this field.

### J. A. PRIDE

General Industrial Agent, Seaboard Air Line Railway

NORFOLK, VIRGINIA.

## BOSSON & LANE

### Manufacturing Chemists

Specialties for the Textile Trade

Works and Office

ATLANTIC, MASS.



## The Yarn Market

Philadelphia, Pa. — There were some sales of large lots of yarn last week, but generally the buying in this market was made up of small lots for prompt deliveries. During last month trading was poor and total sales were low. Most of the business done was at low prices.

Manufacturers of knit goods were not active buyers last week. Underwear manufacturers report that so far, the winter with them has been normal and that stocks in the hands of distributors have been well cleaned up and it is generally thought that buyers will begin to place orders for next season during this month. Export trade is becoming a much larger factor in the underwear trade and many mills are busy on goods for foreign trade. Fleeced lined underwear has been practically sold out, and there is little left for domestic consumption.

Manufacturers of heavy weight underwear are usually well covered on yarns before the first of December, but this season is an exception and only a few of them have taken enough yarn to cover their needs. Jobbers are said to have covered not more than a quarter of their needs, so it is expected that they will place many orders this month, and that knitters will then buy yarns to cover the orders.

The demand last week for combed yarns was light and sales were small. There are large stocks of combed yarns in this market. A good many inquiries for combed yarns have been received lately, and it is expected that these will result in good sales by the end of another week. Southern frame spun combed peeler on cones sold on the basis of 19 to 20 1-2 cents a pound for 10s. Spinners in the South have advanced their prices slightly on weaving yarns, and some of them refused offers of 15 cents for 25,000 to 50,000 pounds of 20-2 warps. Spinners quotations ranged from 15 1-2 to 16 1-2 cents, and offers of 17 1-2 cents for 30-2 warps were refused by some. The higher prices asked have steadied this end of the market somewhat.

### Southern Single Skeins.

3s to 8s.....	12	—
10s.....	13	—
12s.....	13 1-2	—
14s.....	13 1-2-14	—
14s.....	13 1-2-14	—
16s.....	14	—14 1-2
20s.....	15	—
24s.....	15 1-2-16	—
26s.....	16	—16 1-2
30s.....	17	—

### Southern Two-Ply Skeins.

8s.....	12 1-2-13	—
10s.....	13	—
12s.....	13	—
14s.....	13	—13 1-2
16s.....	13 1-2-14	—
20s.....	15	—
24s.....	15 1-2-16	—
26s.....	16 1-2	—
30s.....	17	—

50s.....	31 1-2-32 1-2	—
60s.....	35	—

### Southern Single Warps.

8s.....	12 1-2-13	—
10s.....	13 1-2	—
12s.....	13 1-2	—
14s.....	13 1-2-14	—
16s.....	14	—14 1-2
20s.....	15	—
24s.....	16	—
26s.....	16 1-2	—
30s.....	17	—
40s.....	22	—
50s.....	31	—32

### Southern Two-Ply Warps.

8s.....	13	—
10s.....	13 1-2	—
12s.....	14	—
14s.....	14 1-2-15	—
16s.....	15	—15 1-2
20s.....	15 1-2	—
24s.....	16	—16 1-2
26s.....	16 1-2-17	—
30s.....	17 1-2	—
40s.....	17 1-2	—
40s.....	22 1-2-23 1-2	—
50s.....	32	—

### Southern Frame Spun Yarn on Cone.

8s.....	13 1-2-14	—
10s.....	14 1-2-15	—
12s.....	14 1-2-15 1-2	—
14s.....	15	—16
16s.....	15 1-2-16	—
18s.....	16	—16 1-2
20s.....	16 1-2	—
22s.....	16 1-2-17	—
24s.....	17	—17 1-2
24s.....	17	—17 1-2
26s.....	17 1-2-18	—
30s.....	18 1-2	—

### Carpet and Upholstery Yarn in Skeins.

9-4 slack.....	14 1-2	—
8-4 slack.....	14 1-2	—
8-3-4 hard twist.....	12 1-2-13	—

### Two-Ply Carded Peeler in Skeins.

22s.....	17	—
24s.....	17 1-2	—
26s.....	18	—
30s.....	18 1-2-19	—
36s.....	21	—21 1-2
40s.....	24	—
50s.....	28	—29
60s.....	35	—35 1-2

### Two-Ply Combed Peeler Skeins.

20s.....	23	—23 1-2
24s.....	25	—
30s.....	28	—28 1-2
40s.....	33	—33 1-2
50s.....	37	—38
60s.....	42	—44
70s.....	50	—52
80s.....	60	—63

### Too Hurried.

A Chicago banker was dictating a letter to his stenographer. "Tell Mr. Soandso," he ordered, "that I will meet him in Schenectady." "How do you spell Schenectady?" asked the stenographer. "S-c, S-c-e-r-e-r. Tell him I'll meet him in Albany."—Ex.

## F. C. Abbott & Co.

Charlotte, N. C.

### BROKERS

Southern Mill Stocks, Bank Stocks  
N. C. State Bonds, N. C. Railroad Stock and Other High Grade Securities

### Southern Mill Stocks.

	Bid	Asked
Piedmont Mfg. Co.....	145	...
Salisbury.....	150	...
Roberde.....	160	...
Raleigh Cotton Mill.....	85	...
Steele Cotton Mill.....	106	...
Spartan Mill.....	110	...
Vance Mills.....	107	...
Victory Mfg. Co.....	66	...
Ware Shoals.....	70	75
Washington Mills.....	10	...
Washington Mills, pfd.....	100	...
Woodlawn.....	121	125
Woodside Mills Co., guar.....	100	...
Woodside, pfd.....	80	...
Woodside, com.....	37 1/2	...
Wiscasset.....	125	...
Williamston, com.....	100	...
Williamston, pfd.....	90	...
Young-Harrisell.....	90	...
Abbeville, com.....	85	...
Aragon.....	49	...
American Spinning, com.....	150	...
Alpine, pfd.....	100	...
Alta Vista.....	86	...
Armstrong.....	100	...
Arcadia, S. C., pfd.....	94	...
Arlington.....	136	...
Brown, com.....	120	...
Brown, pfd.....	100	...
Cannon.....	125	...
Cabarrus.....	120	...
Chadwick-Hoskins, pfd.....	100	...
Chronicle.....	160	...
Cliffside.....	190	195
Columbus Mfg.....	85	...
Dixie Cotton Mill, N. C.....	60	...
Dakota.....	125	...
Elba Mfg. Co., pfd.....	100	...
Entwistle Mfg. Co.....	100	115
Efrd, N. C.....	110	...
Erwin, com.....	155	...
Erwin, pfd.....	100	...
Easley.....	175	...
Flint.....	200	...
Florence.....	125	...
Gaston Mfg.....	85	...
Gaffney Mfg. Co.....	57	...
Gibson.....	100	...
Gibson pfd.....	100	...
Glenwood.....	96	...
Gray Mfg. Co.....	125	...
Henrietta.....	117	125
Highland Park.....	200	203
Highland Park, pfd.....	102	...
Imperial.....	136	...
Kesler.....	161	...
Lancaster Mills, pfd.....	95	...
Limestone.....	150	...
Loray Mills pfd.....	85	...
Loray, com.....	10	...
Lowell.....	200	...
Marion.....	75	...
Marlboro Cotton Mill.....	50	...
Majestic.....	150	...
Modena.....	105	...
Ozark.....	110	...
Paola.....	70	...
Pacolet, com.....	100	103
Pacolet, 1st pfd.....	100	103
Parker, common.....	5	10
Parker Mills, pfd.....	30	...
Parker Mills, guaranteed.....	87 1/2	...
Patterson.....	129	...
Poe Mfg. Co.....	90	101

### Economy in Dyeing.

(Continued from Page 9.)

this type have been found effective in degumming of silk. The loading and packing of most machines is the special point to be learnt for each individual case.

The above are the main points which decide the effectiveness of patent dyeing machines. They are capable of effecting great economy in dyeing at intermediate stages of manufacture. The initial cost of installation is usually relatively great, and in a machine costing, say, £300, it is often difficult to account for more than, say, £50 or £60 worth of materials and labor in its manufacture. This is important, because during the present war so many important patents owned by Germans and Austrians have lapsed that the home-made machine may be well worth while building.

With regard to the utilization of waste products from dyeing, not a great deal has been done. Usually the difficulty has been to get rid of the stuff down the drain if possible. Perhaps the most important thing done in this connection has been the extensive use of re-causticising apparatus for spent caustic soda from mercerising, etc. Incidentally, it may be mentioned that the sludge of precipitated chalk from re-causticising plant is valuable for cement manufacture, and also good for a manure if thrown out in lumps or small heaps and allowed to harden till it can be broken up and spread. There is no doubt that more will be done in this direction. The present interest in sudcake, and the attempts to recover unextracted fat, are good indications. If the war continues long the price of potash compounds will be such as to make even a temporary installation of recovery plant for potash salts in wool a paying proposition. This need not be very elaborate—a preliminary steeping of the fleeces in warm water before scouring, the water extract being evaporated on large iron tray-shaped vessels such as are used in dye manufacture. The brown residue contains a large amount of potassium carbonate, and when calcined in a furnace is almost white.—Textile Manufacturer of Manchester, Eng.

### Picker Stick Factory For Greenville.

The Piedmont Hardwood Manufacturing company is a newly organized company, which is to be located on Hudson street in West End, Greenville, S. C. This firm will make picker sticks, loom lays, all wooden parts of a loom, and a patented wooden lug strap. Some 18 or 25 persons will be employed by this firm, which hopes to begin operations near the first of the year. The officers are J. B. Broadenax, president, who comes here from Rock Hill; W. W. Carter secretary and treasurer, of this city; D. L. McKenzie, who have been traveling for textile hardwood supplies for eight years and has made Greenville his headquarters, is general manager. The firm occupies the building formerly occupied by the Hall Lumber Co.



## Personal Items

J. L. McCoy is now overseer of spinning at the Hartwell Mills, Hartwell, Ga.

T. B. Camp has resigned as overseer of carding at the Edna Cotton Mills, Reidsville, N. C.

D. J. Bardner has resigned as overseer spinning at the Edna Cotton Mills, Reidsville, N. C.

Tom Tisdale has resigned his position with the Chesnee (S. C.) Mfg. Co., to become overseer carding at the Deep River Mills, Randleman, N. C.

W. E. Tisdale has resigned as overseer carding at the Deep River Mills, Randleman, N. C., to become carder and spinner at the Edna Cotton Mills, Reidsville, N. C.

N. M. Neal has resigned as overseer of weaving at the Edna Mills, Reidsville, N. C., to accept a similar position at the Riverside Mills, Worthville, N. C.

### Christmas Gifts and Dinners.

(Continued from Page 14.)

G. A. Polatty, superintendent, also received a handsome toilet set.

W. T. Royster, overseer of carding and spinning, was presented with a gold ring by the help in his department.

H. W. West, overseer weaving, was presented with a pair of cuff links.

W. B. Sinclair, second hand in cloth room, received a fountain pen, and J. M. Permenter a watch chain.

On Jan. 5 Thos. R. Morton, superintendent of the Edenton (N. C.) Mills, gave his overseers a dinner at Traylor's, which was much enjoyed by all present. Those attending were W. D. Lawson, carder, N. Baker, second hand, T. H. Cromer, spinner, Grover Sutton, second hand in spinning, Miles Somer, second hand in twisting. After the supper several moving picture shows were visited.

On Christmas Eve at the Lowe Mfg. Co., Huntsville, Ala., employees of the spinning department presented to their overseer, Joe E. Brendle, a handsome library table. Mr. Brendle has received nine Christmas presents from his employees at this place as this is his ninth Christmas, and he has gotten a nice present each year. O. P. Pickney, his assistant, made the presentation speech in the presence of the employees. Mr. Brendle said in accepting, that good employees nearly always made good overseers and that if he had been kind to them they were largely responsible.

A New Year's dinner was served at the home of E. F. Carter, Kannapolis, with the following bleachery overseers and their wives present: H. F. Propst, C. R. Duval, C. K. Hoke, and R. C. Propst. Geo. Caine who has assumed control of the bleachery and finishing was also present. Mr. Carter was presented

# WANTED

EVERY MILL in the SOUTH to use  
REMOVOIL, LOOM LUBRIK, MYCO NON-FLUID  
OIL AND LOOM GREASE, DISINFECTANTS,  
MYCO GREASE SIZE.

**MASURY-YOUNG CO.**

Est. 1857

BOSTON, MASS.

Diamond Roving Cans  
Diamond Fibre Trucks  
Diamond Doffing Boxes



Diamond State Fibre Co., Elsmere, Del.

Southern Representatives, PEARSON & RAMSAUR, GREENVILLE, S. C.

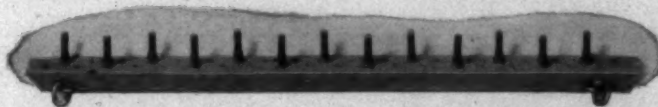
## OLD SHUTTLES MADE NEW

Why throw your old SHUTTLES away when you can save  
money by having them refilled at the

**WESTMINSTER SHUTTLE WORKS**

WESTMINSTER, S. C.

ONCE TRIED — ALWAYS USED



**RICE DOBBY CHAIN AND PEGS**

**RICE DOBBY CHAIN CO., : : Millbury, Mass.**

## THE FELTON BRUSHES



We Make "The Little Green Comber Duster"

**D. D. FELTON BRUSH COMPANY**  
Manufacturers and Repairers, ATLANTA, GA.

## American Overhauling and Repair Company

(Formerly Skidmore & Jordan)

Box 815, ATLANTA, GA.

Overhaulers of COTTON MILL MACHINERY, etc.  
Moving and erecting of old and new machinery a specialty.  
Flyers balanced and repaired.  
Spindles straightened and repointed.

ASK ABOUT US—WE CAN MAKE YOU MONEY.

OUR LARGEST ASSETS ARE PLEASED CUSTOMERS

## SCOTCH SIZE OR KLEISTER



THIS IS an old preparation, well known to the majority of Cotton Manufacturers, on account of the general satisfaction it has always given. A binder for both fine and coarse counts as it combines readily with any starches, lays the surface fibre and holds the size well on the yarn. Manufacturers of exports and denims find it valuable, as it reduces shedding and loom waste to a minimum. Should use Raw Tallow or Soluble Tallow in addition. Write for formula.

**ARABOL MANUFACTURING COMPANY**

100 William Street, New York

CAMERON MacRAE Southern Sales Agent CHARLOTTE, N. C.

with a handsome gold mounted elk horn umbrella by the overseers as a Christmas present. After a very pleasant hour at dinner, the overseers retired to the Y. M. C. A. to enjoy the interesting show which was being given by this institution.

Since the bleachery has been enlarged, and the other responsibilities of the position have been increased, Mr. Carter has been relieved of the bleaching and finishing, and will now act in an advisory position to the management of the mill.

### Hice Mfg. Co. to Rebuild.

At a recent meeting of the stockholders of the Hice Manufacturing Co., at Johnson City, Tenn., it was decided to rebuild their plant which was destroyed by fire on the morning of December 11th, with a loss of \$40,000.

The company will rebuild their plant on a much larger and better plan in every respect on the same ground occupied by the plant destroyed.

One large building that was being constructed by the company, was saved from the fire. This building will be completed as early as possible, and it will be used by the company to begin their operations until other buildings can be erected. Representatives state that it is the purpose of the company to be handling commodities within the next forty to sixty days.

The new plant will be moderately equipped with the latest and most up-to-date machinery and labor saving devices that money will buy. A modern sprinkler system, which had been purchased previous to the fire, but which had not arrived, will be installed at a cost of \$6,000. This new addition to the company's property, will cut their insurance rate to 50 cents as against \$3.50 paid previous to the fire.

The company will manufacture the same lines as before consisting of bent wheel rims, spokes and other material for wagon, carriages and farm implements, solid and built-up table rims, wooden loom specialties for textile mills, and plain and quartered oak dimension stock.

These products are manufactured from oak, ash, hickory, walnut and chestnut timber and the company has always found a ready market for all its products. The old plant was built in 1911 and employed about seventy-five men.

### Government Report on Cotton Business.

(Continued from Page 4.)

woolen mills and in the manufacture of felts, batting, mattresses and other miscellaneous cotton products. The total consumption of cotton during the past year was somewhat greater than that of the previous year, but the record production of 1913 resulted in a considerable increase in stocks. To this is added the prospect of one of the largest crops ever produced and of a materially reduced consumption due to the European war, thus making an unprecedented condition in the cotton world.



# Want Department

## Want Advertisements.

If you are needing men for any position or have second hand machinery, etc., to sell the want columns of the **Southern Textile Bulletin** afford the best medium for advertising the fact.

Advertisements placed with us reach all the mills and show results.

## Employment Bureau.

The Employment Bureau is a feature of the **Southern Textile Bulletin** and we have better facilities for placing men in Southern mills than any other journal.

The cost of joining our employment bureau is only \$1.00 and there is no other cost unless a position is secured, in which case a reasonable fee is charged.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern textile industry.

**WANTED** by Southern man, at present employed as superintendent, to correspond with a mill that wants a superintendent who can and will get results. Have held present position as superintendent for over nine years. 36 years old. Married. Guilt-edge references. Correspondence solicited and strictly confidential. Address No. 926.

**WANT** position as superintendent of weaving or yarn mill of not less than 15,000 spindles. Now employed as superintendent, but want larger mill. Fine references. Address No. 927.

**WANT** position as superintendent, assistant superintendent or carder. Am now employed as carder in large mill and can furnish present employers as reference. Have long experience. Address No. 928.

**WANT** position as superintendent. Am experienced on all grades of yarns, including Sea Islands and peeler cotton. Am now employed and giving satisfaction, but wish to change. Fine references. Address No. 929.

**WANT** position as overseer of weaving at not less than \$3.50. Am now employed and giving satisfaction, but for satisfactory reasons prefer to change. Good reference. Address No. 930.

**WANTED** position of superintendent by practical man with executive ability, fully capable of managing a mill, one who will stay on the job and get possible results. Ten years as superintendent, twelve as overseer. Experienced on yarns and plain weaves. Now employed. A-1 references. Address No. 931.

**WANT** position as overseer of carding or carding and spinning, or assistant superintendent. Especially experienced or combed yarns. Satisfactory references. Address No. 932.

**WANT** position as overseer of dressing or slashing. 16 years experience in this department, during 11 years of which was overseer. Can furnish satisfactory references. Address No. 933.

**WANT** position as overseer of spinning. Have held present position 2 years and give satisfaction, but want larger job. Age 39. Can give all former employers as reference. Address No. 934.

**WANT** position as master mechanic. 30 years experience and can furnish good references. Would like to correspond with any one needing a man. Address No. 935.

**WANT** position as overseer of spinning at not less than \$3.50 per day. Have 20 years experience in mill work and am at present employed, but prefer to change. Address No. 936.

**WANT** position as overseer of carding or overhauling in card room. Experienced in clothing carding and general card room overhauling work. Can come on short notice. Address No. 937.

**WANT** position as master mechanic. Experience in cotton mill work and an expert repair man. Can furnish best of references. Address No. 937.

**WANT** position as carder in large mill, or carding and spinning in any size mill. Have long experience and have always made good. Now employed. Address No. 939.

**WANT** position as overseer of carding in medium to large size mill. Have many years experience on white and colored work, fine and coarse numbers. Married. On last job 7 years. Good references. Address No. 940.

**WANT** position as carder. I am now employed as carder and know how to watch my cost and my room. Reason for wanting to change will be furnished upon request. Address No. 941.

**WANT** position as superintendent or overseer of weaving or salesman for sizing compound. Have had long experience in the mill and as salesman and can furnish good references. Address No. 942.

**WANT** position as superintendent or manager. Have had long experience, especially on colored goods, and can give satisfaction. Good references. Address No. 943.

**WANT** position as overseer of cloth room. Good habits. Age 26.

Business college education. Long practical experience in cloth room. Good references. Address No. 944.

**WANT** position as superintendent of 10,000 to 20,000 spindle mill in N. C. or S. C. Age 48. Have 30 years experience on wide variety of white and colored goods. Have been superintendent for 20 years and am now employed. Strictly sober. Good references. Address No. 945.

**WANT** position as superintendent of yarn or plain weaving mill. Age 37. Sober. Energetic. Married. Present position overseer of carding. Would consider large card room. Address No. 946.

**WANT** position as superintendent. Have had long experience and have always given satisfaction. Would prefer mill in South Carolina. Fine references. Address No. 947.

**WANT** position as overseer of spinning and winding. Age 26. Married. Strictly sober. Long experience and good references. Address No. 948.

**WANT** position as overseer of carding. Have had long experience on both colored and white work and am now employed. Fine references. Address No. 949.

**WANT** position as overseer of spinning or carding and spinning. Now employed as overseer. Married. Age 27. Long experience. Address No. 950.

**WANT** position as superintendent or overseer of carding or weaving, thoroughly practical man, at present employed as superintendent. Married and strictly temperate, 29 years experience, 16 years as overseer and superintendent; best of references; labor cost at present very low. All correspondence strictly confidential. Address No. 951.

**WANT** position as superintendent. Age 45. Had 25 years practical experience and am experienced on many classes of goods. Strictly sober. Can furnish good references. Address No. 952.

**WANT** position as superintendent of cotton yarn, weaving or hosiery mill. Am a practical mill man, who thoroughly understands machinery, manufacturing in every detail, and am a carder, comb, ring spinner and twisting, spooling, warping. 24 years experience. Address No. 953.

**WANT** position as superintendent. Long experience both as carder and superintendent on both yarn and weaving mills. Can give satisfactory references. Address No. 954.

**WANT** position as overseer of plain weaving. Now employed and am giving satisfaction, but want larger job. Strictly sober. Best of references. Address No. 955.

**WANT** position as master mechanic or electrician for cotton mill.

# PATENTS

## Trade Marks and Copyrights

Send your business direct to Washington. Saves time and insures better service.

Personal Attention Guaranteed

30 Years Active Service

**SIGGERS & SIGGERS**

Patent Lawyers

Suite 34 N. U. Washington, D. C.

Have six years practical and technical experience. Now employed but can change on short notice. Address No. 956.

**WANT** position as superintendent or overseer of carding and spinning. Am now employed, but want larger job. Have had long experience and can furnish good references. Address No. 957.

**WANT** position as superintendent. Have 18 years experience as superintendent. Have held present position for 10 years and given satisfaction, but want larger mill. Good references. Address No. 958.

**WANT** position as carder or machinist. Now employed but prefer to change. Can give good references as to character and ability. Address No. 959.

**WANT** position as overseer of weaving. Have 1 years experience as second hand and overseer on both Draper and plain looms. Am now employed but prefer to change. Married and strictly sober. Can furnish references. Address No. 960.

**WANT** position as cloth room overseer of medium or large size mill. Have 14 years experience on wide variety of fabrics and also understand napping. Age 35. Married. Now employed. Address No. 961.

**WANT** position as overseer of weaving. Age 32. Strictly sober and reliable. Have 8 years experience as overseer and can furnish the very best of references. Address No. 962.

**WANT** position as overseer of spinning and winding. 18 years experience in spinning and winding. Age 29. Employed as overseer at present. Can furnish good references. Address No. 963.

**WANT** position as overseer of finishing, shipping clerk or cotton weigher. Married. Sober. Experienced. Good reasons for desiring to change. Address No. 964.

**WANT** position as overseer of weaving. Have had long experience on both coarse and fine goods. Sober. Reliable. Fine references. Address No. 965.

**WANT** position as overseer of finishing on plain or fancy gingham. 10 years experience on fancy finishing and general cloth room work. Now employed. Fine references. Address No. 966.



WANT position as machinist by an all round shop man of eight years experience. Age 28. Married. References from former employers. Address No. 967.

WANT position as overseer of carding and spinning in a small mill, or overseer spinning in a large mill. Have had long experience in both and can give the best of references. Address No. 968.

WANT position as overseer of weaving. Am now employed in large mill and am giving satisfaction, but prefer to change. Good experience and references. Address No. 969.

WANT position as superintendent. Have had long experience especially on colored goods and can furnish satisfactory references as to ability and character. Address No. 970.

WANT position as superintendent or overseer of carding. Have had long experience and can furnish all former employees as references. Address No. 971.

WANT position as overseer of cloth room and shipping. 8 years experience as overseer and shipping clerk. At present employed. Age 33. Married. Strictly sober. Can furnish best of references. Address No. 972.

WANT position as overseer of spinning. Have had long experience and have always made good because I get results. Good references. Address No. 973.

WANT position as overseer of weaving. Age 33. Now employed but have the best reasons for wanting to change. Can furnish good references. Address No. 974.

WANT position as superintendent. Long experience, especially on fine combed yarns. Can furnish references from former employers. Address No. 975.

WANT position as superintendent or carder and spinner. 16 years in those positions and always gave satisfaction. Can furnish best of references. Address No. 976.

WANT position as superintendent. Have had long experience as carder and spinner and superintendent. Can furnish first-class references from present and former employers. Address No. 978.

WANT position as superintendent by a practical man. Have had 14 years experience as superintendent and thoroughly understand all the details connected with the manufacturing of cotton goods. Can give A-1 reference as to my executive ability and character. Address No. 979.

WANT position as overseer of weaving. Experienced on both Draper and Stafford looms and am now employed but would change for larger job. Address No. 980.

WANT position as roller coverer. Have long experience and turn out first class work. Would like to

correspond with mill needing competent man. Address No. 981.

WANT position as carder, spinner or superintendent, but have had more experience as carder. Am 33 years old, married, sober and reliable. Can furnish best of references. Address No. 982.

WANT position as overseer of carding, or spinning. Experienced for many years. Am employed at present, but want to change. Satisfactory references. Address 983.

WANT position as overseer of weaving. Have had 17 years experience on plain and cheek work. Have good training on cost, quality and quantity. Have reputation as a good manager of help. Address No. 984.

WANT position as superintendent or as carder and spinner. Now employed but want to change for good reasons. Can furnish good references from former employers. Address 985.

WANT position as superintendent or manager. Have had long experience and can give satisfactory references. Now employed, but have good reasons for wanting to change. Address 986.

WANT position as overseer of spinning or carding and spinning. Long experience and can furnish best of references both as to character and ability. Address No. 987.

WANT position as overseer of weaving. Now employed in large mill but for good reasons would prefer to change. Have long experience and can furnish entirely satisfactory references. Address No. 988.

WANT position as superintendent or as carder and spinner. Experienced in both yarn and weaving mills and can give satisfaction. Am now employed, but would change for larger mill. Address No. 990.

WANT position as overseer of spinning. Have had long experience and can furnish first class references from former employers. Strictly sober. Address No. 991.

WANT position as superintendent or overseer of large card room. Special experience on combers and fine yarns, but also have experience on coarse goods. Can furnish excellent references. Address No. 992.

WANT position as master mechanic or electrical engineer. Age 30. Married. Now employed in this capacity and can furnish best of references. Address No. 993.

WANT position as overseer of carding or spinning or both. 18 years experience in both. Nothing less than \$250 considered. Good references both as to character and ability. Address No. 994.

WANT position as superintendent or position as traveling salesman. Am now employed as superintendent but have also had traveling experience and can furnish satisfactory references for either position. Address No. 995.

WANT position as overseer of dyeing and bleaching. Have handled skeins, warps, raw stock, beams and cops, natural and mercerized yarn. Used to indigo, direct and sulphur colors. Age 29. Married. Good references. Address No. 997.

WANT position as overseer of cloth room. Age 30. Married. Have eight years experience as cloth room overseer in good mills. Can furnish the best of references. Address No. 998.

WANT position as overseer of weaving. Thoroughly practical man at present employed as overseer of weaving. Married and strictly temperate, 38 years old. Have had 12 years experience as overseer of weaving. Will be pleased to submit reference and correspond with any good mill. Address No. 999.

WANT position as superintendent. Have had long experience and always give satisfaction. Reason for changing, better salary. Age 45. Married. Strictly sober. Experienced from ground up on both white and colored work. Address No. 1000.

WANT position as superintendent of yarn mill. Long practical experience on all classes of yarns from 4's to 180's. Also experienced on automobile tires and similar fabrics. Address No. 1001.

WANT position as overseer of large card room or as assistant superintendent. Now employed but would change for larger job. Long experience and good references. Address No. 1002.

WANT position as overseer of weaving and designing in large mill. Am now employed and giving satisfaction, but want larger job. Good references. Address No. 1004.

WANT position of bookkeeper, stenographer or timekeeper or responsible place in mill office where there is a chance of promotion. Age 24. Sober. Can furnish good reference. Three years experience in mill office work. Address No. 1005.

WANT position as superintendent of either yarn or weaving mill. Have had large experience as superintendent and can furnish satisfactory references, both as to character and ability. Address No. 1006.

WANT position as overseer of carding. Am experienced on both coarse and fine numbers, white and colored. Prefer Ga. or S. C. Sober. Good manager of help. Satisfactory references. Address No. 1007.

WANT position as master mechanic. 20 years experience and can furnish fine references. Have 2 dofers and 1 spinner. Strictly sober. Address No. 1008.

WANT position as overseer of weaving. Many years experience and always made good. Can furnish best of references from all former employers. Address No. 1015.

WANT position as overseer of weaving or superintendent. Have had long experience in both positions and can give satisfaction. Address No. 1016.

WANT position as carder in large mill or superintendent in small or medium size yarn mill. Am now employed but prefer to change. Address No. 1017.

WANT position as superintendent. Am young man of good education and also education and also long practical experience. Am now employed but want larger mill. Address No. 1018.

WANT position as overseer of spinning or as superintendent of small mill. Have had long experience on both coarse and fine work. Excellent references. Address No. 1019.

WANT position as overseer of spinning. Am now employed in charge of winding and spooling. Can change for better job. 20 years in mill. 10 years as overseer. Also have diploma in cotton carding and spinning and will deliver the goods. Age 37. Married. Temperate. Address No. —

#### A Petition.

"Teach me that sixty minutes make one hour, sixteen ounces one pound, and one hundred cents one dollar.

"Help me to live so that I can lie down at night with a clear conscience, without a gun under my pillow, and unhaunted by the faces of those to whom I have brought pain.

"Grant, I beseech Thee, that I may earn my meal ticket on the square, and in doing thereof that I may not stick the gaff where it does not belong.

"Deafen me to the jingle of tainted money and the rustle of unholy skirts.

Blind me to the faults of the other fellow, but reveal to me my own.

"Guide me so that each night when I look across the dinner table at my wife, who has been a blessing to me, I will have nothing to conceal.

"Keep me young enough to laugh with my children and to lose myself in their play.

"And then, when comes the smell of flowers, and the tread of soft steps, and the crushing of the hearse's wheels in the gravel out in front of my place, make the ceremony short and the epitaph simple: 'Here lies a Man.'—Homer M. McKee, in Brotherhood.

There were five passengers in the street car, and as it approached a crossing the conductor called, "William!"

One man got up and went out. "Ann!" announced the conductor, and a woman left the car.

Tucked away in the corner was a little man with a foreign-looking face. When the conductor called "George!" and another passenger alighted, the little man awoke to the situation. He rose, tiptoed down the aisle and whispered to the conductor, "Before you calls out de name of de lady in dere, I'll tell you I wants to git off soon. My name, it is Paul."—Ex.



# CLASSIFIED LIST OF ADVERTISERS

## AUTOMATIC BANDING MACHINES DYESTUFFS AND CHEMICALS—

Cole Bros.

## BALING PRESSES—

Boomer and Boschert Press Co.  
Saco-Lowell Shops.

## BEAMERS—

T. C. Entwistle Co.  
Saco-Lowell Shops.

## BELTING—

American Supply Co.  
Bradford Belting Co.  
Graton & Knight Mfg. Co.  
Philadelphia Belting Co.

## BOBBINS AND SPOOLS—

American Supply Co.  
Draper Co.

## BRUSHES—

D. D. Felton Brush Co.

## CARD CLOTHING—

W. H. Bigelow.  
Jos. Sykes Bros.  
Saco-Lowell Shops.

## CARDS—

Mason Machine Works.  
Potter & Johnston Machinery Co.  
Saco-Lowell Shops.

## CLOTH ROOM MACHINERY—

Woonsocket Machine and Press Co.  
Saco-Lowell Shops.

## COMMISSION MERCHANTS—

Grinnell Willis & Co.  
Richard A. Blythe.

## DOBBIES—

Crompton & Knowles Loom Wks.  
Mason Machine Works.  
The Stafford Company.

## DOFFING BOXES—

Diamond State Fibre Co.

## DRAWING FRAMES—

Mason Machine Works.  
Saco-Lowell Shops.  
Woonsocket Machine and Press Co.

## DRAWING ROLLS—

Metallic Drawing Roll Company.

## DRINKING FOUNTAINS—

Puro Sanitary Drinking Fountain Co.

## DROP WIRES—

Connecticut Mill Supply Co.

American Dyewood Co.

Arabol Mfg. Co.

Bossom and Lane.

Cassela Color Co.

John P. Marston.

Faberwerke-Hoechst Co.

A. Klipstein &amp; Co.

Seydel Manufacturing Co.

So. Dyestuff &amp; Chemical Co.

## DYEING, DRYING, BLEACHING AND FINISHING MACHINERY—

Philadelphia Tex. Machinery Co.  
C. G. Sargents Sons.  
H. W. Butterworth & Sons Co.  
Saco-Lowell Shops.

## ELECTRICAL MACHINERY—

General Electric Co.  
Westinghouse Electric Co.

## FIRE HOSE AND FITTINGS—

American Supply Co.

## FLYER PRESSERS—

Southern Spindle &amp; Flyer Co.

## HUMIDIFIERS—

American Moistening Co.  
Stuart W. Cramer.  
G. M. Parks Co.

## HUMIDIFYING MACHINES—

C. G. Sargents Sons Corp.

## LOOMS—

Crompton & Knowles Loom Works  
Draper Company.  
Mason Machine Works.  
Saco-Lowell Shops.  
Stafford Company.

## LOOM CRANK SHAFT PRESSES—

Clayton Jones Mfg. Co.

## LOOM HARNESS, REEDS AND PICKERS—

American Supply Co.  
Garland Mfg. Co.  
Graton & Knight Mfg. Co.

## LUBRICANTS—

Albany Lubricating Co.  
Masury, Young Co.

## LUG STRAP—

E. H. Jacobs Mfg. Co.  
Graton & Knight Mfg. Co.

## MILL CRAYONS—

American Supply Co.

## MILL SUPPLIES—

American Supply Co.  
Connecticut Mill Supply Co.  
Diamond State Fibre Co.

## OVERHAULERS—

American Overhauling and Repair Co.

Co.

Southern Spindle &amp; Flyer Co.

## PICKERS AND LAPPERS—

Potter & Johnston Machinery Co.  
Saco-Lowell Shops.

## PREPARATORY MACHINERY—

Fales and Jenks Machine Co.  
Saco-Lowell Shops.

## PRESSES—

Boomer and Boschert Press Co.

## POWER TRANSMISSION MACHINERY—

Woonsocket Machine and Press Co.

## PUMPS—

Stuart W. Cramer.

## RAILROADS—

Seaboard Air Line.  
Southern Railway.

## RING SPINNING FRAMES—

Fales and Jenks Machine Co.  
Mason Machine Works.  
Saco-Lowell Shops.

## RING TRAVELERS—

American Supply Co.  
U. S. Ring Traveler Co.

## ROLLS—

American Supply Co.  
Metallic Drawing Roll Co.  
Saco-Lowell Shops.  
Southern Spindle & Flyer Co.

## ROVING CANS—

Diamond State Fibre Co.

## ROVING MACHINERY—

Saco-Lowell Shops.  
Woonsocket Machine and Press Co.

## SADDLES—

Dixon Lubricating Saddle Co.  
Graphite Lubricating Co.

## SEPARATORS—

Draper Company.

## SHUTTLES—

Shambow Shuttle Co.

## SIZING COMPOUND—

Arabol Mfg. Co.  
John P. Marston.  
A. Klipstein & Co.  
Keever Bros. Co.  
Seydel Mfg. Co.  
So. Dyestuff & Chemical Co.

## SLASHERS—

Saco-Lowell Shops.

## SLASHER CLOTH—

American Felt Co.

## SOAPS—

Keever Bros. Co.  
Seydel Mfg. Co.

## SOFTENERS—COTTON—

Arabol Mfg. Co.  
New Brunswick Chemical Co.  
A. Klipstein & Co.  
Seydel Mfg. Co.  
So. Dyestuff & Chemical Co.

## SPINDLES—

Draper Company.  
Southern Spindle & Flyer Co.

## SPINNING RINGS—

Connecticut Mill Supply Co.  
Draper Company.  
Whitinsville Spinning Ring Co.  
Pawtucket Spinning Ring Co.

## SPOOLERS—

Draper Co.  
Easton and Burnham Machine Co.  
Saco-Lowell Shops.

## STARCH—

Keever Bros. Co.  
Keever Starch Co.

## TEMPLES—

Draper Company.

## TWISTERS—

Draper Company.  
Fales and Jenks Machine Co.  
Saco-Lowell Shops.

## WARP STOP MOTIONS—

Crompton & Knowles Loom Works  
Draper Company.  
The Stafford Co.

## WEIGHTING COMPOUNDS—

Arabol Mfg. Co.  
Bossom & Lane.  
Faberwerke-Hoechst Co.  
John P. Marston.  
Keever Bros. Co.  
A. Klipstein & Co.  
Seydel Mfg. Co.  
So. Dyestuff & Chemical Co.

## WARPERS—

T. C. Entwistle Co.  
Draper Co.

## WILLOWS—

Saco-Lowell Shops.  
C. G. Sargents Sons Co.

## WINDERS—

Easton and Burnham Machine Co.  
Saco-Lowell Shops.

# Joseph Sykes Brothers, Huddersfield, England

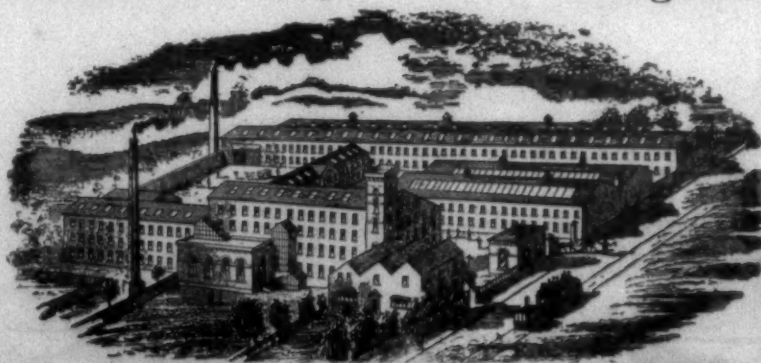
## CARD CLOTHING MANUFACTURERS

Hardened and Tempered Steel Wire Plow Ground  
Card Clothing

Revolving Top Flats Reclothed. Licker-ins Rewound. Burnisher and Stripper Fillets, Dronsfield's Grinder Rolls. Emery Fillets. All Regular sizes of Card Clothing always in Stock and Shipped same Day Order is Received.

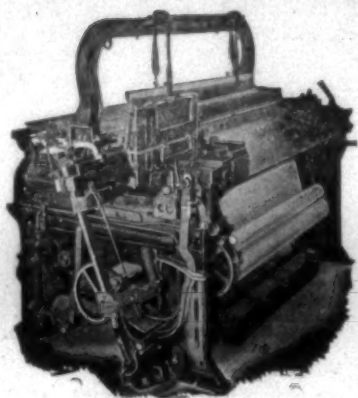
RICHARD D. THOMAS, Southern Agent

## REPAIR SHOPS AND STOCK ROOMS

TOMPKINS BUILDING  
P. O. Box 88  
CHARLOTTE, N. C.4½ PETERS STREET  
P. O. Box 793  
ATLANTA, GA.



## "IDEAL" AUTOMATIC LOOMS



Unsurpassed in Simplicity, Durability and other Desirable Qualities. No special mill supplies required. They make less waste than any other loom.

### They Produce Superior Cloth

We invite correspondence and investigation

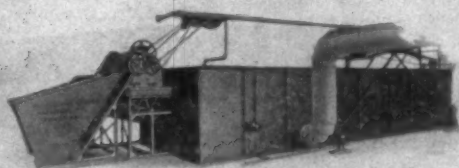
### THE STAFFORD COMPANY

READVILLE, MASS.

FRED H. WHITE, Southern Agent

Independence Building, Charlotte, N. C.

## "PROCTOR" DRYERS FIREPROOF



Substantial, Durable, and low cost of operation. Dryers for all kinds of Material

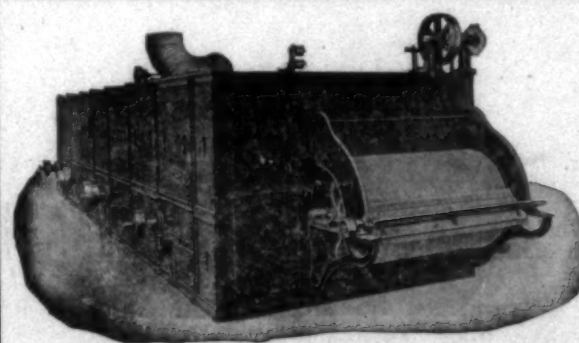
The Philadelphia Textile Machinery Company

BUILDERS OF DRYING MACHINERY

INCORPORATED  
1885

PHILADELPHIA

H. G. MAYER, CHARLOTTE, N. C.  
REPRESENTATIVE



Fireproof  
castiron frame,  
steel and asbes-  
tos panelled

Stock Dryers.

C. G. Sargent  
Sons Corp.  
Graniteville, Mass.

Fred H. White  
Southern  
Representative  
Charlotte, N. C.

THE SOUTHERN TEXTILE BULLETIN

Charlotte, N. C.

The South's Leading Textile Journal



"The leather belt that pays for itself, plus a real profit."

## WILL YOU ACCEPT

with our compliments, a plan that will save YOU money?

## It is Absolutely FREE!

Simply fill in and mail the coupon in the right hand corner. You will be surprised to find that, with this plan, you can make one dollar do the work of three.

IT IS YOURS for the ASKING.

### The Bradford Belting Company

CINCINNATI, OHIO, U. S. A.

GENTLEMEN:

Without obligating me in any way, please send plan for saving money on mill equipment.

Name .....

Position .....

Firm .....

Address .....

MAIL COUPON NOW